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Yellowstone River Basin and Adjacent Coal Fields

OPERATION STUDY

Ad Hoc Work Group Report

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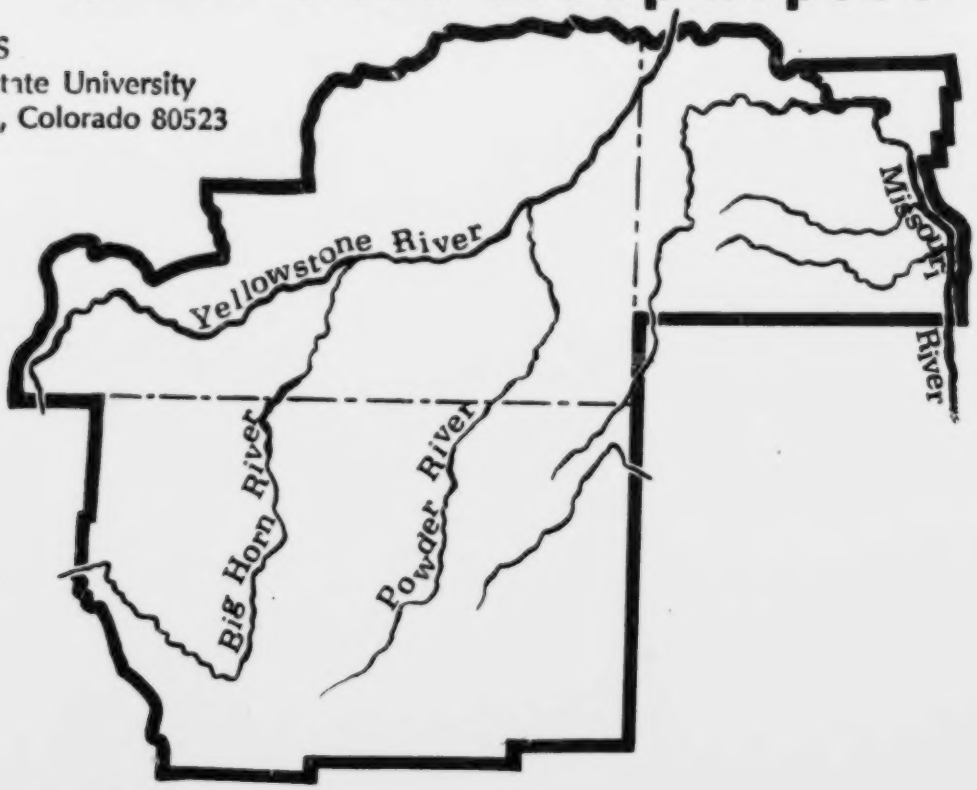

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May
1978

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The Missouri River Basin Commission is the principal agency for the coordination of Federal, State, interstate, local and nongovernmental plans for the development of water and related land resources in the area served by the Missouri River and its tributaries. As an independent regional Commission, it also provides a forum in which States meet with Federal agencies to conduct and coordinate water and related land resources planning. The Commission's chairman is appointed by the President; its vice-chairman is elected from among State members.

MRBC members are Colorado; Iowa; Kansas; Minnesota; Missouri; Montana; Nebraska; North Dakota; South Dakota; Wyoming; Department of Agriculture; Department of the Army; Department of Commerce; Energy Research and Development Administration; Environmental Protection Agency; Federal Power Commission; Department of Health, Education and Welfare; Department of Housing and Urban Development; Department of the Interior; Department of Transportation; Yellowstone River Compact Commission; Big Blue River Compact Administration. Canada is an observer.

YELLOWSTONE RIVER BASIN AND ADJACENT COAL AREAS

RIVER AND RESERVOIR OPERATION STUDIES

AD HOC WORK GROUP REPORT
WORK ITEM NO. 22
LEVEL B STUDY

Prepared by

Hydrology Section
Field Planning Branch
Upper Missouri Regional Office
Bureau of Reclamation
Billings, Montana

May 1978

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INTRODUCTION

The river and reservoir operation studies were to fulfill Work Item No. 22 required for the Yellowstone River Basin and Adjacent Coal Areas, Level B Study. These studies were to evaluate the water impacts of the Without Plan and the Recommended Plan as developed by the State Study Teams for their planning areas. The Without Plan includes future development that would take place without government expenditures. The Recommended Plan includes future development that is government planned and funded.

Originally, these studies were to be part of the State Study Team's Planning Report for their planning area. Due to the delays in the Level B Study, the North Dakota Planning Area was the only planning area in which the river and reservoir operation studies were completed as required. Reasons for this were that the rivers in the North Dakota Study Team Planning Area are located within the boundaries of North Dakota and the studies did not require any data from the other planning areas in Montana and Wyoming. The river and operation studies for North Dakota Planning Area are part of the North Dakota Tributaries Study Team Report, February 1978.

Because the Montana and Wyoming reports were not completed simultaneously, the river and operation studies are an Ad Hoc Report to the Montana and Wyoming Study Team reports. This document presents data to reflect the effects the State Study Team recommended plan and alternative plans have on the 1975 depleted flows that was Work Item No. 12 of the Plan of Study, Yellowstone River Basin and Adjacent Coal Areas, Level B Study.

METHOD

Operation studies on water budgets have been a tool used in answering water supply problems related to land and water resource for years, so to fulfill the task stated under Work Item No. 22, a general computer operation study (OPSTUDY) was programed to provide the following water quantity and quality information:

1. Flows for each of the four levels of development (1985 and 2000 Without Plan, and 1985 and 200 With Recommended Plan) at the Yellowstone River station and tributary stations listed in Table 1.
2. Differences of the level of development flows at each station with instream flow requests from Montana Fish and Game and Montana Department of Health (for backup data only).
3. The operating of existing and proposed reservoirs to reflect various levels of development.
4. Determination of the total dissolved solids (TDS) at the stream gaging stations based on the regression equations and the various levels of flows.

The size of the Yellowstone River drainage basin made it necessary to run two operation studies for the basin. The operation of the Bighorn River drainage (including Wind, Shoshone, and Greybull Rivers) was one study, and the mainstem of the Yellowstone River (plus the tributaries Stillwater, Clarks Fork, Tongue, and Powder Rivers)

Table 1

SELECTED GAGING STATIONS FOR DEPLETION STUDY

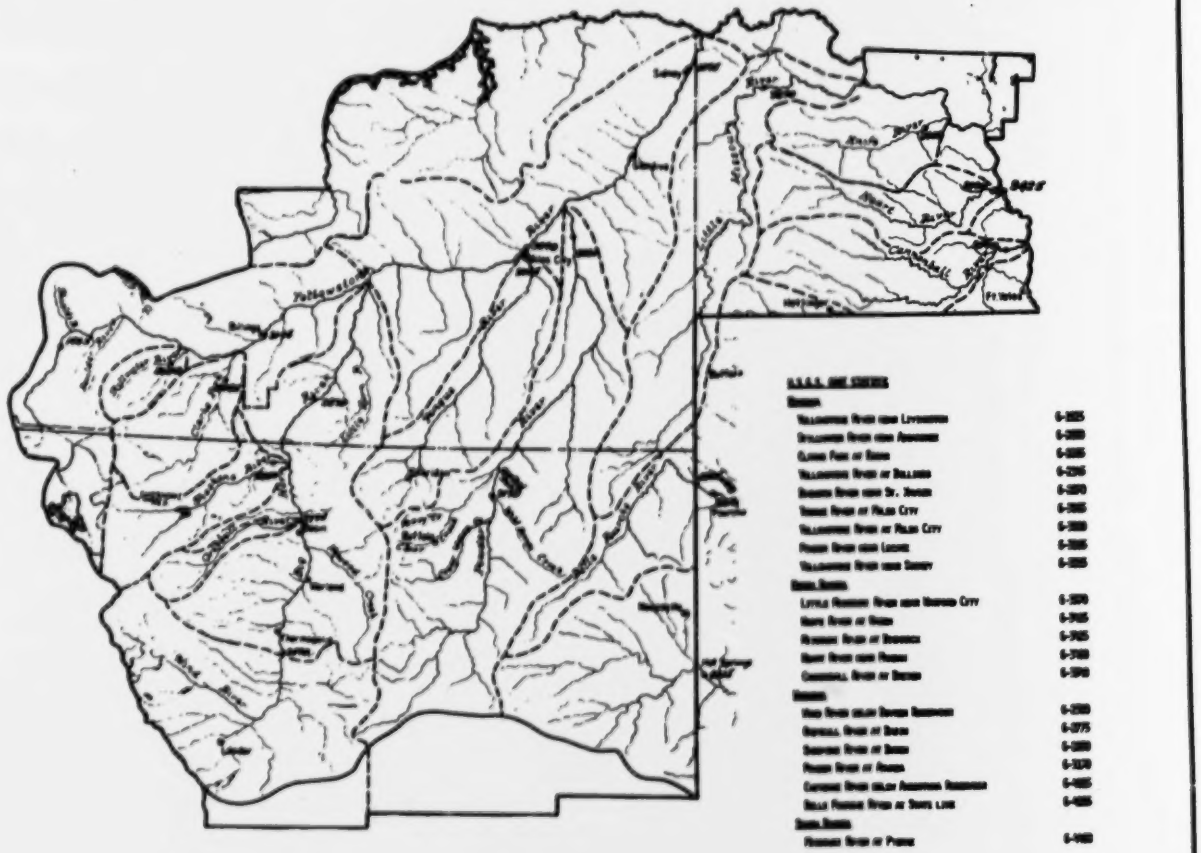
Name	Station Number
Yellowstone River near Livingston	6-1925
Stillwater River near Absarokee	6-2050
Clarks Fork at Edgar	6-2085
Yellowstone River at Billings	6-2145
Wind River below Boysen Reservoir	6-2590
Greybull River at Basin	6-2775
Shoshone River at Byron	6-2850
Bighorn River near St. Xavier	6-2870
Tongue River at Miles City	6-3085
Yellowstone River at Miles City	6-3090
Powder River at Arvada	6-3170
Powder River near Locate	6-3265
Yellowstone River near Sidney	6-3295

composed the other study. Figure 1 is a drainage basin map of the Yellowstone River and adjacent coal areas. This map shows the Bighorn River Basin and the flow gaging stations which provided flow information for the studies. The initial station on the Bighorn River used in the studies was 6-2870, Bighorn River at St. Xavier. The other stations in the Bighorn Basin were 6-2850, Shoshone River at Byron; 6-2775, Greybull River at Basin; and 6-2590, Wind River at Boysen. The study of the mainsteam Yellowstone River included Stations 6-1925, Yellowstone River at Livingston; 6-2050, Stillwater River at Absarokee; 6-2085, Clarks Fork of Yellowstone River at Edgar; 6-2145, Yellowstone River at Billings; 6-2870, Bighorn River at St. Xavier; 6-3085, Tongue River at Miles City; 6-3090, Yellowstone River at Miles City; 6-3170, Powder River at Arvada; 6-3265, Powder River at Locate; and 6-3295, Yellowstone River at Sidney.

All operation studies require various types and quantities of input data. To generate the information stated above, the following data were used in this study:

1. 1975 level of development flows
2. Future depletions
3. Reservoir operation data
4. Water quality equations (flow versus TDS)
5. Instream flow requests

The 1975 level of development flows were the flows calculated in the Yellowstone River Basin and Adjacent Coal Fields - Depletion Study



The Yellowstone River Basin
and
Adjacent Coal Fields

Drainage Basin Map

of November 1976. For this study, the flow data base taken from the Depletion Study was for the period of years 1939 through 1975. For this reason, flow averages in the Depletion Study are not the same as for this study. The future depletions were projected by the Yellowstone Level B State Study Teams and are found in the Report on the Yellowstone Basin and Adjacent Coal Area, Level B Study for Montana or Wyoming, Volumes 7 and 8, Chapters V and IX or Volumes 1, 2, 3 and 4, Chapter V and VI, respectively. Depletion data were projected for five water consumption uses: irrigation (surface or groundwater), energy, municipal, industrial, and livestock. Tables 2 - 14 show the depletion information by uses and for the river reach in which the depletion will occur. The units are in thousands of acre-feet per year or thousands of acres depending on data received. Each table represents a different plan. The year 2000 with the recommended plan has five versions for the Montana data only. The depletion data were on an annual basis, and the operation study and flow data were on a monthly basis. This required a procedure to distribute the annual depletion monthly. The criteria for this were developed by the Bureau of Reclamation and are discussed in the criteria section.

Three main reservoirs in the Bighorn Basin are Boysen Reservoir, Buffalo Bill Reservoir and Bighorn Lake. These Bureau of Reclamation reservoirs were operated using current elevation-area-capacity data and using the most recent operating criteria set forth in the criteria

Table 2

YELLOWSTONE LEVEL H OPERATION STUDY
1985 WITHOUT PROJECT DEVELOPMENT LEVEL

77/11/29.

BIGHORN RIVER BASIN
INITIAL VALUES AND CONSTANTS*

01	IRR GW ABOVE BOYSEN	-.25000
02	IRR GW BOYSEN-KANE	-.90000
03	IRR GW SHOSHONE ABOVE BYRON	-.80000
04	IRR GW YELLOWTAIL-ST XAVIER	0.00000
05	IRR SW ABOVE BOYSEN	.53000
06	IRR SW BOYSEN -KANE	2.80000
07	IRR SW SHOSHONE ABOVE BYRON	1.00000
08	IRR SW YELLOWTAIL-ST XAVIER	.72000
09	ENERGY ABOVE BOYSEN	0.00000
10	ENERGY BOYSEN-KANE	0.00000
11	ENERGY SHOSHONE ABOVE BYRON	0.00000
12	ENERGY YELLOWTAIL-ST XAVIER	0.00000
13	MUNICIPAL ABOVE BOYSEN	.20000
14	MUNICIPAL BOYSEN-KANE	.30000
15	MUNICIPAL SHOSHONE ABV BYRON	.30000
16	MUNICIPAL YELOWTAL-ST XAVIER	0.00000
17	MUN G ABOVE BOYSEN	0.00000
18	MUN G BOYSEN-KANE	-.10000
19	MUN G SHOSHONE ABOVE BYRON	0.00000
20	INDUSTRIAL ABOVE BOYSEN	.20000
21	INDUSTRIAL BOYSEN-KANE	.40000
22	INDUSTRIAL SHOSHONE ABV BYRON	.30000
23	INDUSTRIAL YELOWTAL-ST XAVIER	0.00000
24	LIVESTOCK ABOVE BOYSEN	.20000
25	LIVESTOCK BOYSEN-KANE	.40000
26	LIVESTOCK SHOSHONE ABV BYRON	.21000
27	LIVESTOCK YELOWTAL-ST XAVIER	.10000
		0.00000
		0.00000
30	BOYSEN MAX RES CONTENT	802.00000
31	BOYSEN MIN RES CONTENT	252.00000
32	BOYSEN START RES CONTENT	600.00000
33	BOYSEN MAX RES. RELEASE	150.00000
34	BUFALO BILL MAX CONTENT	423.90000
35	BUFALO BILL MIN CONTENT	48.20000
36	BUFALO BILL START CONTENT	250.00000
37	BUFALO BILL MAX RELEASE	36.10000
38	BIGHORN MAX RES CONTENT	1116.00000
39	BIGHORN MIN RES CONTENT	483.40000
40	BIGHORN START RES CONTENT	900.00000
41	BIGHORN MAX RES. RELEASE	488.20000
42	BOYSEN MAX RELEASE HT	21.50000

*Lines 1 - 4 - 1,000 AF
5 - 8 - 1,000 AC
8 -42 - 1,000 AF

Table 3

YELLOWSTONE LEVEL B OPERATION STUDY
1985 WITHOUT DEVELOPMENT LEVEL

77/11/30.

YELLOWSTONE RIVER BASIN

INITIAL VALUES AND CONSTANTS*

01	IRR. GROUND W ABOVE LIVINGSTN	0.00000
02	IRR GW LIVINGSTON TO BILLINGS	0.00000
03	IRR GW ABOVE ABSAROKEE	0.00000
04	IRR GW ABOVE EDGAR	-.10000
05	IRR GW BILLINGS TO MILES CITY	0.00000
06	IRR GW BELOW ST XAVIER	0.00000
07	IRR GW TONGUE RIVER WY	0.00000
08	IRR GW TONGUE RIVER MT	0.00000
09	IRR GW MILES CITY TO SIDNEY	0.00000
10	IRR GW ABOVE ARVADA	0.00000
11	IRR GW LITTLE POWDER WYO	0.00000
12	IRR GW POWDER MT	0.00000
13	IRR SW ABOVE LIVINGSTON	1.50000
14	IRR SW LIVINGSTON TO BILLINGS	6.37500
15	IRR SW ABOVE ABSAROKEE	.11500
16	IRR SW ABOVE EDGAR	.60000
17	IRR SW BILLINGS TO MILES CITY	11.14000
18	IRR SW BELOW ST XAVIER	1.66000
19	IRR SW TONGUE RIVER WYO	6.03000
20	IRR SW TONGUE RIVER MT	1.34000
21	IRR SW MILES CITY TO SIDNEY	18.37000
22	IRR SW ABOVE ARVADA	6.19000
23	IRR SW LITTLE POWDER WYO	1.22000
24	IRR SW POWDER MT	.66000
25	ENERGY ABOVE LIVINGSTON	0.00000
26	ENERGY LIVINGSTON TO BILLINGS	0.00000
27	ENERGY ABOVE ABSAROKEE	.01000
28	ENERGY ABOVE EDGAR	0.00000
29	ENERGY BILLINGS TO MILES CITY	27.50000
30	ENERGY BELOW ST XAVIER	0.00000
31	ENERGY TONGUE RIVER WYO	7.50000
32	ENERGY TONGUE RIVER MT	0.00000
33	ENERGY MILES CITY TO SIDNEY	.00500
34	ENERGY POWDER ABOVE ARVADA	15.50000
35	ENERGY LITTLE POWDER RIVER WY	-2.00000
36	ENERGY POWDER RIVER MT.	0.00000
37	MUNICIPAL ABOVE LIVINGSTON	0.00000
38	MUNICIPAL LIVNGSTN TO BILLNGS	2.10000
39	MUNICIPAL ABOVE ABSAROKEE	0.00000
40	MUNICIPAL ABOVE EDGAR	.10000
41	MUNICIPAL BILLINGS TO MILES C	.40000
42	MUNICIPAL BELOW ST XAVIER	.30000
43	MUNICIPAL TONGUE RIVER WYO	.20000
44	MUNICIPAL TONGUE RIVER MT	0.00000
45	MUNICIPAL MILES CITY - SIDNEY	.20000
46	MUNICIPAL ABOVE ARVADA	.10000
47	MUNICIPAL LITTLE POWDER RIVER	0.00000
48	MUNICIPAL POWDER RIVER MT	.60000
49	M DOMESTIC TONGUE RIVER WYO	.10000
50	M DOMESTIC ABOVE ARVADA	.10000
51	M DOMESTIC LITTLE POWDER M	0.00000
52	INDUSTRIAL ABOVE LIVINGSTON	0.00000
53	INDUSTRIAL LIVINGSTON-BILLING	.70000
54	INDUSTRIAL ABOVE ABSAROKEE	0.00000
55	INDUSTRIAL ABOVE EDGAR	.10000
56	INDUSTRIAL BILLINGS-MILES CITY	0.00000
57	INDUSTRIAL BELOW ST XAVIER	0.00000
58	INDUSTRIAL TONGUE RIVER WYO	0.00000
59	INDUSTRIAL TONGUE RIVER MT	0.00000
60	INDUSTRIAL MILES CITY-SIDNEY	.20000
61	INDUSTRIAL ABOVE ARVADA WYO	0.00000
62	INDUSTRIAL LITTLE POWDER WYO	0.00000
63	INDUSTRIAL POWDER RIVER MT.	0.00000
64	LIVESTOCK ABOVE LIVINGSTON	.10000
65	LIVESTOCK LIVINGSTON-BILLINGS	.20000
66	LIVESTOCK ABOVE ABSAROKEE	.10000
67	LIVESTOCK ABOVE EDGAR	.75000
68	LIVESTOCK BILLINGS-MILES CITY	2.00000
69	LIVESTOCK BELOW ST XAVIER	.75000
70	LIVESTOCK TONGUE RIVER WYO	.80000
71	LIVESTOCK TONGUE RIVER MT	.20000
72	LIVESTOCK MILES CITY-SIDNEY	2.10000
73	LIVESTOCK ABOVE ARVADA	.60000
74	LIVESTOCK LITTLE POWDER WYO	0.00000
75	LIVESTOCK POWDER RIVER MT.	.30000

*Lines 1 - 12 - 1,000 AF
13 - 24 - 1,000 AC
25 - 75 - 1,000 AF

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Table 4

YELLOWSTONE LEVEL B OPERATION STUDY — 78/02/16.
2000 WITHOUT DEVELOPMENT LEVEL
BIGHORN RIVER BASIN

INITIAL VALUES AND CONSTANTS*

01	IRR GW ABOVE BOYSEN	-.70000
02	IRR GW BOYSEN-KANE	-1.40000
03	IRR GW SHOSHONE ABOVE BYRON	-2.20000
04	IRR GW YELLOWTAIL-ST XAVIER	0.00000
05	IRR SW ABOVE BOYSEN	1.10000
06	IRR SW BOYSEN-KANE	4.00000
07	IRR SW SHOSHONE ABOVE BYRON	5.00000
08	IRR SW YELLOWTAIL-ST XAVIER	1.80000
09	ENERGY ABOVE BOYSEN	0.00000
10	ENERGY BOYSEN-KANE	0.00000
11	ENERGY SHOSHONE ABOVE BYRON	0.00000
12	ENERGY YELLOWTAIL-ST XAVIER	0.00000
13	MUNICIPAL ABOVE BOYSEN	.60000
14	MUNICIPAL BOYSEN-KANE	1.00000
15	MUNICIPAL SHOSHONE ABV BYRON	.70000
16	MUNICIPAL YELLOWTAIL-ST XAVIER	0.00000
17	MIN Q ABOVE BOYSEN	0.00000
18	MIN Q BOYSEN-KANE	0.00000
19	MIN Q SHOSHONE ABOVE BYRON	0.00000
20	INDUSTRIAL ABOVE BOYSEN	.60000
21	INDUSTRIAL BOYSEN-KANE	1.10000
22	INDUSTRIAL SHOSHONE ABV BYRON	5.40000
23	INDUSTRIAL YELLOWTAIL-ST XAVIER	0.00000
24	LIVESTOCK ABOVE BOYSEN	.30000
25	LIVESTOCK BOYSEN-KANE	1.70000
26	LIVESTOCK SHOSHONE ABV BYRON	1.50000
27	LIVESTOCK YELLOWTAIL-ST XAVIER	.10000
28	MUNICIPAL ABOVE BUFFALO BILL	0.00000
29	INDUSTRIAL ABOVE BUFFALO BILL	0.00000
30	BOYSEN MAX RES CONTENT	302.00000
31	BOYSEN MIN RES CONTENT	252.00000
32	BOYSEN START RES CONTENT	300.00000
33	BOYSEN MAX RES. RELEASE	150.00000
34	BUFFALO BILL MAX CONTENT	423.00000
35	BUFFALO BILL MIN CONTENT	85.20000
36	BUFFALO BILL START CONTENT	250.00000
37	BUFFALO BILL MAX RELEASE	96.10000
38	BIGHORN MAX RES CONTENT	1116.00000
39	BIGHORN MIN RES CONTENT	485.00000
40	BIGHORN START RES CONTENT	900.00000
41	BIGHORN MAX RES. RELEASE	488.20000
42	BUFFALO BILL CONDUIT MAX	21.50000
43	LIVESTOCK ABOVE BUFFALO BILL	0.00000

*Lines 1 - 4 - 1,000 AF
5 - 8 - 1,000 AC
~~9 - 43 - 1,000 AF~~

Table 5

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

YELLOWSTONE RIVER BASIN
INITIAL VALUES AND CONSTANTS*

01	IRR. GROUND W ABOVE LIVINGSTN	0.00000
02	IRR GW LIVINGSTON TO BILLINGS	0.00000
03	IRR GW ABOVE ABSAROKEE	0.00000
04	IRR GW ABOVE EDGAR	.23000
05	IRR GW BILLINGS TO MILES CTY	0.00000
06	IRR GW BELOW ST XAVIER	0.00000
07	IRR GW TONGUE RIVER WY	0.00000
08	IRR GW TONGUE RIVER MT	0.00000
09	IRR GW MILES CITY TO SIDNEY	0.00000
10	IRR GW ABOVE ARVADA	0.00000
11	IRR GW LITTLE POWDER WYO	0.00000
12	IRR GW POWDER MT	0.00000
13	IRR SW ABOVE LIVINGSTON	3.75000
14	IRR SW LIVINGSTON TO BILLINGS	15.94000
15	IRR SW ABOVE ABSAROKEE	.28000
16	IRR SW ABOVE EDGAR	1.67000
17	IRR SW BILLINGS TO MILES CITY	27.86000
18	IRR SW BELOW ST XAVIER	4.20000
19	IRR SW TONGUE RIVER WYO	6.03000
20	IRR SW TONGUE RIVER MT	3.35000
21	IRR SW MILES CITY TO SIDNEY	45.94000
22	IRR SW ABOVE ARVADA	6.19000
23	IRR SW LITTLE POWDER WYO	1.22000
24	IRR SW POWDER MT	1.65000
25	ENERGY ABOVE LIVINGSTON	0.00000
26	ENERGY LIVINGSTON TO BILLINGS	.17300
27	ENERGY ABOVE ABSAROKEE	.52500
28	ENERGY ABOVE EDGAR	9.80000
29	ENERGY BILLINGS TO MILES CITY	43.65000
30	ENERGY BELOW ST XAVIER	0.00000
31	ENERGY TONGUE RIVER WYO	30.00000
32	ENERGY TONGUE RIVER MT	24.19000
33	ENERGY MILES CITY TO SIDNEY	0.00000
34	ENERGY POWDER ABOVE ARVADA	51.00000
35	ENERGY LITTLE POWDER RIVER WY	0.00000
36	ENERGY POWDER RIVER MT.	18.81400
37	MUNICIPAL ABOVE LIVINGSTON	0.00000
38	MUNICIPAL LIVNGSTN TO BILLNGS	4.50000
39	MUNICIPAL ABOVE ABSAROKEE	0.00000
40	MUNICIPAL ABOVE EDGAR	.20000
41	MUNICIPAL BILLINGS TO MILES C	3.20000
42	MUNICIPAL BELOW ST XAVIER	1.10000
43	MUNICIPAL TONGUE RIVER WYO	0.00000
44	MUNICIPAL TONGUE RIVER MT	0.00000
45	MUNICIPAL MILES CITY - SIDNEY	0.00000
46	MUNICIPAL ABOVE ARVADA	0.00000
47	MUNICIPAL LITTLE POWDER RIVER	0.00000
48	MUNICIPAL POWDER RIVER MT	4.00000
49	R DOMESTIC TONGUE RIVER WYO	.10000
50	R DOMESTIC ABOVE ARVADA	.10000
51	R DOMESTIC LITTLE POWDER R	0.00000
52	INDUSTRIAL ABOVE LIVINGSTON	0.00000
53	INDUSTRIAL LIVINGSTON-BILLING	1.40000
54	INDUSTRIAL ABOVE ABSAROKEE	0.00000
55	INDUSTRIAL ABOVE EDGAR	2.20000
56	INDUSTRIAL BILLINGS-MILES CTY	0.00000
57	INDUSTRIAL BELOW ST XAVIER	0.00000
58	INDUSTRIAL TONGUE RIVER WYO	0.00000
59	INDUSTRIAL TONGUE RIVER MT	0.00000
60	INDUSTRIAL MILES CITY-SIDNEY	.40000
61	INDUSTRIAL ABOVE ARVADA WYO	0.00000
62	INDUSTRIAL LITTLE POWDER WYO	0.00000
63	INDUSTRIAL POWDER RIVER MT.	0.00000
64	LIVESTOCK ABOVE LIVINGSTON	.97000
65	LIVESTOCK LIVINGSTON-BILLINGS	.97000
66	LIVESTOCK ABOVE ABSAROKEE	.97000
67	LIVESTOCK ABOVE EDGAR	1.15000
68	LIVESTOCK BILLINGS-MILES CITY	5.00000
69	LIVESTOCK BELOW ST XAVIER	1.15000
70	LIVESTOCK TONGUE RIVER WYO	1.60000
71	LIVESTOCK TONGUE RIVER MT	2.40000
72	LIVESTOCK MILES CITY-SIDNEY	5.00000
73	LIVESTOCK ABOVE ARVADA	1.40000
74	LIVESTOCK LITTLE POWDER WYO	.10000
75	LIVESTOCK POWDER RIVER MT.	2.40000

*Lines 1 - 12 - 1,000 AF
13 - 24 - 1,000 AG
25 - 75 - 1,000 AF

Table 6

YELLOWSTONE LEVEL B OPERATION STUDY 78/02/16.
1985 RECOMMENDED DEVELOPMENT LEVEL

BIGHORN RIVER BASIN

INITIAL VALUES AND CONSTANTS*

01	IRR GW ABOVE BOYSEN	-.25000
02	IRR GW BOYSEN-KANE	-.90000
03	IRR GW SHOSHONE ABOVE BYRON	-.60000
04	IRR GW YELLOWTAIL-ST XAVIER	0.00000
05	IRR SW ABOVE BOYSEN	11.70000
06	IRR SW BOYSEN -KANE	66.50000
07	IRR SW SHOSHONE ABOVE BYRON	42.40000
08	IRR SW YELLOWTAIL-ST XAVIER	.72000
09	ENERGY ABOVE BOYSEN	0.00000
10	ENERGY BOYSEN-KANE	0.00000
11	ENERGY SHOSHONE ABOVE BYRON	0.00000
12	ENERGY YELLOWTAIL-ST XAVIER	0.00000
13	MUNICIPAL ABOVE BOYSEN	.25000
14	MUNICIPAL BOYSEN-KANE	.49000
15	MUNICIPAL SHOSHONE ABV BYRON	.56000
16	MUNICIPAL YELLOWTAIL-ST XAVIER	0.00000
17	MIN & PROVE BOYSEN	0.00000
18	MIN & BOYSEN-KANE	-.10000
19	MIN & SHOSHONE ABOVE BYRON	0.00000
20	INDUSTRIAL ABOVE BOYSEN	.50000
21	INDUSTRIAL BOYSEN-KANE	1.19000
22	INDUSTRIAL SHOSHONE ABV BYRON	1.09100
23	INDUSTRIAL YELLOWTAIL-ST XAVIER	0.00000
24	LIVESTOCK ABOVE BOYSEN	.28600
25	LIVESTOCK BOYSEN-KANE	.78000
26	LIVESTOCK SHOSHONE ABV BYRON	.62400
27	LIVESTOCK YELLOWTAIL-ST XAVIER	.10000
28	MUNICIPAL ABOVE BUFFALO BILL	.10000
29	INDUSTRIAL ABOVE BUFFALO BILL	0.00000
30	BOYSEN MAX RES CONTENT	662.00000
31	BOYSEN MIN RES CONTENT	252.00000
32	BOYSEN START RES CONTENT	600.00000
33	BOYSEN MAX RES. RELEASE	150.00000
34	BUFFALO BILL MAX CONTENT	425.90000
35	BUFFALO BILL MIN CONTENT	48.20000
36	BUFFALO BILL START CONTENT	250.00000
37	BUFFALO BILL MAX RELEASE	36.10000
38	BIGHORN MAX RES CONTENT	1116.00000
39	BIGHORN MIN RES CONTENT	485.40000
40	BIGHORN START RES CONTENT	900.00000
41	BIGHORN MAX RES. RELEASE	488.20000
42	BUFFALO BILL CONDUIT MAX	21.50000
43	LIVESTOCK ABOVE BUFFALO BILL	0.00000

*Lines 1 - 43 - 1,000 AF

Table 7

YELLOWSTONE LEVEL B OPERATION STUDY
1985 RECOMEND DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER BASIN
INITIAL VALUES AND CONSTANTS*

01	IRR. GROUND W ABOVE LIVINGSTN	0.00000
02	IRR GW LIVINGSTON TO BILLINGS	0.00000
03	IRR GW ABOVE ARSAROKEE	0.00000
04	IRR GW ABOVE EDGAR	5.35000
05	IRR GW BILLINGS TO MILES CTY	0.00000
06	IRR GW BELOW ST XAVIER	0.00000
07	IRR GW TONGUE RIVER WY	0.00000
08	IRR GW TONGUE RIVER MT	0.00000
09	IRR GW MILES CITY TO SIDNEY	0.00000
10	IRR GW ABOVE ARVADA	0.00000
11	IRR GW LITTLE POWDER WYO	0.00000
12	IRR GW POWDER MT	0.00000
13	IRR SW ABOVE LIVINGSTON	1.50000
14	IRR SW LIVINGSTON TO BILLINGS	8.37500
15	IRR SW ABOVE ARSAROKEE	.11300
16	IRR SW ABOVE EDGAR	.01000
17	IRR SW BILLINGS TO MILES CITY	11.14000
18	IRR SW BELOW ST XAVIER	1.40000
19	IRR SW TONGUE RIVER WYO	13.40000
20	IRR SW TONGUE RIVER MT	1.34000
21	IRR SW MILES CITY TO SIDNEY	18.40000
22	IRR SW ABOVE ARVADA	17.70000
23	IRR SW LITTLE POWDER WYO	2.50000
24	IRR SW POWDER MT	10.73000
25	ENERGY ABOVE LIVINGSTON	0.00000
26	ENERGY LIVINGSTON TO BILLINGS	0.00000
27	ENERGY ABOVE ARSAROKEE	.01000
28	ENERGY ABOVE EDGAR	0.00000
29	ENERGY BILLINGS TO MILES CITY	36.94000
30	ENERGY BELOW ST XAVIER	0.00000
31	ENERGY TONGUE RIVER WYO	7.81100
32	ENERGY TONGUE RIVER MT	1.04000
33	ENERGY MILES CITY TO SIDNEY	.00500
34	ENERGY POWDER ABOVE ARVADA	.01200
35	ENERGY LITTLE POWDER RIVER WY	0.00000
36	ENERGY POWDER RIVER MT.	6.10100
37	MUNICIPAL ABOVE LIVINGSTON	0.00000
38	MUNICIPAL LIVNGSTN TO BILLNGS	2.10000
39	MUNICIPAL ABOVE ARSAROKEE	0.00000
40	MUNICIPAL ABOVE EDGAR	.10000
41	MUNICIPAL BILLINGS TO MILES C	.40000
42	MUNICIPAL BELOW ST XAVIER	.30000
43	MUNICIPAL TONGUE RIVER WYO	0.00000
44	MUNICIPAL TONGUE RIVER MT	0.00000
45	MUNICIPAL MILES CITY - SIDNEY	.20000
46	MUNICIPAL ABOVE ARVADA	0.40000
47	MUNICIPAL LITTLE POWDER RIVER	0.00000
48	MUNICIPAL POWDER RIVER MT	.03500
49	R DOMESTIC TONGUE RIVER WYO	.18700
50	R DOMESTIC ABOVE ARVADA	0.00000
51	R DOMESTIC LITTLE POWDER W	0.00000
52	INDUSTRIAL ABOVE LIVINGSTON	0.00000
53	INDUSTRIAL LIVINGSTON-BILLING	.70000
54	INDUSTRIAL ABOVE ARSAROKEE	0.00000
55	INDUSTRIAL ABOVE EDGAR	.10000
56	INDUSTRIAL BILLINGS-MILES CTY	0.00000
57	INDUSTRIAL BELOW ST XAVIER	0.00000
58	INDUSTRIAL TONGUE RIVER WYO	0.00000
59	INDUSTRIAL TONGUE RIVER MT	0.00000
60	INDUSTRIAL MILES CITY-SIDNEY	.20000
61	INDUSTRIAL ABOVE ARVADA WYO	0.00000
62	INDUSTRIAL LITTLE POWDER WYO	0.00000
63	INDUSTRIAL POWDER RIVER MT.	0.00000
64	LIVESTOCK ABOVE LIVINGSTON	.10000
65	LIVESTOCK LIVINGSTON-BILLINGS	.20000
66	LIVESTOCK ABOVE ARSAROKEE	.10000
67	LIVESTOCK ABOVE EDGAR	.75000
68	LIVESTOCK BILLINGS-MILES CITY	2.00000
69	LIVESTOCK BELOW ST XAVIER	.75000
70	LIVESTOCK TONGUE RIVER WYO	.80000
71	LIVESTOCK TONGUE RIVER MT	1.25000
72	LIVESTOCK MILES CITY-SIDNEY	2.10000
73	LIVESTOCK ABOVE ARVADA	.40000
74	LIVESTOCK LITTLE POWDER WYO	.10000
75	LIVESTOCK POWDER RIVER MT.	1.65000

*Lines 1 - 12 - 1,000 AF
13 - 24 - 1,000 AC
25 - 75 - 1,000 AF

Table 8

YELLOWSTONE LEVEL B OPERATION STUDY — 78/02/16.
2000 RECOMENDED DEVELOPMENT LEVEL
BIGHORN RIVER BASIN

INITIAL VALUES AND CONSTANTS*

01	IRR GW ABOVE BOYSEN	-.70000
02	IRR GW BOYSEN-KANE	-1.40000
03	IRR GW SHOSHONE ABOVE BYRON	-2.20000
04	IRR. GW YELLOWTAIL-ST XAVIER	0.00000
05	IRR. SW ABOVE BOYSEN	42.70000
06	IRR SW BOYSEN-KANE	85.90000
07	IRR SW SHOSHONE ABOVE BYRON	93.50000
08	IRR SW YELLOWTAIL-ST XAVIER	10.07000
09	ENERGY ABOVE BOYSEN	0.00000
10	ENERGY BOYSEN-KANE	0.00000
11	ENERGY SHOSHONE ABOVE BYRON	0.00000
12	ENERGY YELLOWTAIL-ST XAVIER	0.00000
13	MUNICIPAL ABOVE BOYSEN	.70800
14	MUNICIPAL BOYSEN-KANE	1.15000
15	MUNICIPAL SHOSHONE ABV BYRON	.80000
16	MUNICIPAL YELLOWTAIL-ST XAVIER	0.00000
17	MIN & ABOVE BOYSEN	0.00000
18	MIN & BOYSEN-KANE	0.00000
19	MIN & SHOSHONE ABOVE BYRON	0.00000
20	INDUSTRIAL ABOVE BOYSEN	1.58000
21	INDUSTRIAL BOYSEN-KANE	5.99000
22	INDUSTRIAL SHOSHONE ABV BYRON	7.38600
23	INDUSTRIAL YELLOWTAIL-ST XAVIER	0.00000
24	LIVESTOCK ABOVE BOYSEN	2.08000
25	LIVESTOCK BOYSEN-KANE	1.90000
26	LIVESTOCK SHOSHONE ABV BYRON	2.30000
27	LIVESTOCK YELLOWTAIL-ST XAVIER	.19000
28	MUNICIPAL ABOVE BUFFALO BILL	.40000
29	INDUSTRIAL ABOVE BUFFALO BILL	.20000
30	BOYSEN MAX RES CONTENT	802.00000
31	BOYSEN MIN RES CONTENT	252.00000
32	BOYSEN START RES CONTENT	590.00000
33	BOYSEN MAX RES. RELEASE	150.00000
34	BUFALO BILL MAX CONTENT	425.90000
35	BUFALO BILL MIN CONTENT	43.20000
36	BUFALO BILL START CONTENT	250.00000
37	BUFALO BILL MAX RELEASE	35.10000
38	BIGHORN MAX RES CONTENT	1116.00000
39	BIGHORN MIN RES CONTENT	493.40000
40	BIGHORN START RES CONTENT	900.00000
41	BIGHORN MAX RES. RELEASE	488.20000
42	BUFFALO BILL CONDUIT MAX	21.50000
43	LIVESTOCK ABOVE BUFFALO BILL	.25400

*Lines 1 - 43 - 1,000 AF

YELLOWSTONE LEVEL B OPERATION STUDY 78/02/17.
2000 -ECONO DEVELOPMENT LEVEL

YELLOWSTONE RIVER BASIN
INITIAL VALUES AND CONSTANTS*

01	IRR. GROUND W ABOVE LIVINGSTN	4.00000
02	IRR GW LIVINGSTON TO BILLINGS	9.00000
03	IRR GW ABOVE ARSAROKEE	0.00000
04	IRR GW ABOVE EDGAR	10.34000
05	IRR GW BILLINGS TO MILES CITY	1.60000
06	IRR GW BELOW ST XAVIER	.95000
07	IRR GW TONGUE RIVER WY	0.00000
08	IRR GW TONGUE RIVER MT	0.00000
09	IRR GW MILES CITY TO SIDNEY	0.00000
10	IRR GW ABOVE ARVADA	0.00000
11	IRR GW LITTLE POWDER WYO	0.00000
12	IRR GW POWDER MT	0.00000
13	IRR SW ABOVE LIVINGSTON	4.75000
14	IRR SW LIVINGSTON TO BILLINGS	14.90000
15	IRR SW ABOVE ARSAROKEE	.28000
16	IRR SW ABOVE EDGAR	3.47000
17	IRR SW BILLINGS TO MILES CITY	53.97000
18	IRR SW BELOW ST XAVIER	37.00000
19	IRR SW TONGUE RIVER WYO	15.92000
20	IRR SW TONGUE RIVER MT	16.40000
21	IRR SW MILES CITY TO SIDNEY	71.83000
22	IRR SW ABOVE ARVADA	14.70000
23	IRR SW LITTLE POWDER WYO	2.50000
24	IRR SW POWDER MT	13.97000
25	ENERGY ABOVE LIVINGSTON	0.00000
26	ENERGY LIVINGSTON TO BILLINGS	.17300
27	ENERGY ABOVE ARSAROKEE	.52500
28	ENERGY ABOVE EDGAR	0.00000
29	ENERGY BILLINGS TO MILES CITY	43.65000
30	ENERGY BELOW ST XAVIER	0.00000
31	ENERGY TONGUE RIVER WYO	30.31100
32	ENERGY TONGUE RIVER MT	20.91000
33	ENERGY MILES CITY TO SIDNEY	0.00000
34	ENERGY POWDER ABOVE ARVADA	0.00000
35	ENERGY LITTLE POWDER RIVER WY	0.00000
36	ENERGY POWDER RIVER MT.	55.03000
37	MUNICIPAL ABOVE LIVINGSTON	0.00000
38	MUNICIPAL LIVNGSTN TO BILLNGS	6.50000
39	MUNICIPAL ABOVE ARSAROKEE	0.00000
40	MUNICIPAL ABOVE EDGAR	.20000
41	MUNICIPAL BILLINGS TO MILES C	3.20000
42	MUNICIPAL BELOW ST XAVIER	1.19000
43	MUNICIPAL TONGUE RIVER WYO	0.00000
44	MUNICIPAL TONGUE RIVER MT	0.00000
45	MUNICIPAL MILES CITY - SIDNEY	0.00000
46	MUNICIPAL ABOVE ARVADA	0.00000
47	MUNICIPAL LITTLE POWDER RIVER	0.00000
48	MUNICIPAL POWDER RIVER MT	4.52500
49	R DOMESTIC TONGUE RIVER WYO	.20000
50	R DOMESTIC ABOVE ARVADA	3.00000
51	R DOMESTIC LITTLE POWDER R	0.00000
52	INDUSTRIAL ABOVE LIVINGSTON	0.00000
53	INDUSTRIAL LIVINGSTON-BILLING	1.40000
54	INDUSTRIAL ABOVE ARSAROKEE	0.00000
55	INDUSTRIAL ABOVE EDGAR	2.20000
56	INDUSTRIAL BILLINGS-MILES CTY	0.00000
57	INDUSTRIAL BELOW ST XAVIER	0.00000
58	INDUSTRIAL TONGUE RIVER WYO	0.00000
59	INDUSTRIAL TONGUE RIVER MT	0.00000
60	INDUSTRIAL MILES CITY-SIDNEY	.40000
61	INDUSTRIAL ABOVE ARVADA WY	0.00000
62	INDUSTRIAL LITTLE POWDER WYO	0.00000
63	INDUSTRIAL POWDER RIVER MT.	0.00000
64	LIVESTOCK ABOVE LIVINGSTON	.97000
65	LIVESTOCK LIVINGSTON-BILLINGS	.97000
66	LIVESTOCK ABOVE ARSAROKEE	.97000
67	LIVESTOCK ABOVE EDGAR	1.15000
68	LIVESTOCK BILLINGS-MILES CITY	4.00000
69	LIVESTOCK BELOW ST XAVIER	1.15000
70	LIVESTOCK TONGUE RIVER WYO	1.20000
71	LIVESTOCK TONGUE RIVER MT	2.40000
72	LIVESTOCK MILES CITY-SIDNEY	4.00000
73	LIVESTOCK ABOVE ARVADA	.90000
74	LIVESTOCK LITTLE POWDER WYO	.30000
75	LIVESTOCK POWDER RIVER MT.	3.50000

*Lines 1 - 12 - 1,000 AF
13 - 24 - 1,000 AC
25 - 75 - 1,000 AF

Table 10

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL

78/03/16.

Without SRD Projects

YELLOWSTONE RIVER BASIN
INITIAL VALUES AND CONSTANTS*

01	IRR. GROUND W ABOVE LIVINGSTN	4.00000
02	IRR GW LIVINGSTON TO BILLINGS	0.00000
03	IRR GW ABOVE ABSAROKEE	0.00000
04	IRR GW ABOVE EDGAR	10.55000
05	IRR GW BILLINGS TO MILES CTY	1.60000
06	IRR GW BELOW ST XAVIER	.95000
07	IRR GW TONGUE RIVER WY	0.00000
08	IRR GW TONGUE RIVER MT	0.00000
09	IRR GW MILES CITY TO SIDNEY	0.00000
10	IRR GW ABOVE ARVADA	0.00000
11	IRR GW LITTLE POWDER WYO	0.00000
12	IRR GW POWDER MT	0.00000
13	IRR SW ABOVE LIVINGSTON	4.75000
14	IRR SW LIVINGSTON TO BILLINGS	15.94000
15	IRR SW ABOVE ABSAROKEE	.28000
16	IRR SW ABOVE EDGAR	5.47000
17	IRR SW BILLINGS TO MILES CITY	34.24000
18	IRR SW BELOW ST XAVIER	37.90000
19	IRR SW TONGUE RIVER WYO	15.92000
20	IRR SW TONGUE RIVER MT	16.40000
21	IRR SW MILES CITY TO SIDNEY	53.42000
22	IRR SW ABOVE ARVADA	19.70000
23	IRR SW LITTLE POWDER WYO	2.50000
24	IRR SW POWDER MT	13.97000
25	ENERGY ABOVE LIVINGSTON	0.00000
26	ENERGY LIVINGSTON TO BILLINGS	.17300
27	ENERGY ABOVE ABSAROKEE	.52500
28	ENERGY ABOVE EDGAR	0.00000
29	ENERGY BILLINGS TO MILES CITY	45.65000
30	ENERGY BELOW ST XAVIER	0.00000
31	ENERGY TONGUE RIVER WYO	30.31100
32	ENERGY TONGUE RIVER MT	20.91000
33	ENERGY MILES CITY TO SIDNEY	0.00000
34	ENERGY POWDER ABOVE ARVADA	0.00000
35	ENERGY LITTLE POWDER RIVER WY	0.00000
36	ENERGY POWDER RIVER MT.	55.03000
37	MUNICIPAL ABOVE LIVINGSTON	0.00000
38	MUNICIPAL LIVNGSTN TO BILLNGS	6.50000
39	MUNICIPAL ABOVE ABSAROKEE	0.00000
40	MUNICIPAL ABOVE EDGAR	.20000
41	MUNICIPAL BILLINGS TO MILES C	3.20000
42	MUNICIPAL BELOW ST XAVIER	1.10000
43	MUNICIPAL TONGUE RIVER WYO	0.00000
44	MUNICIPAL TONGUE RIVER MT	0.00000
45	MUNICIPAL MILES CITY - SIDNEY	0.00000
46	MUNICIPAL ABOVE ARVADA	0.00000
47	MUNICIPAL LITTLE POWDER RIVER	0.00000
48	MUNICIPAL POWDER RIVER MT	4.52500
49	M DOMESTIC TONGUE RIVER WYO	.20000
50	M DOMESTIC ABOVE ARVADA	3.00000
51	M DOMESTIC LITTLE POWDER R	0.00000
52	INDUSTRIAL ABOVE LIVINGSTON	0.00000
53	INDUSTRIAL LIVINGSTON-BILLING	1.40000
54	INDUSTRIAL ABOVE ABSAROKEE	0.00000
55	INDUSTRIAL ABOVE EDGAR	2.20000
56	INDUSTRIAL BILLINGS-MILES CTY	0.00000
57	INDUSTRIAL BELOW ST XAVIER	0.00000
58	INDUSTRIAL TONGUE RIVER WYO	0.00000
59	INDUSTRIAL TONGUE RIVER MT	0.00000
60	INDUSTRIAL MILES CITY-SIDNEY	.40000
61	INDUSTRIAL ABOVE ARVADA WYO	0.00000
62	INDUSTRIAL LITTLE POWDER WYO	0.00000
63	INDUSTRIAL POWDER RIVER MT.	0.00000
64	LIVESTOCK ABOVE LIVINGSTON	.97000
	LIVESTOCK LIVINGSTON-BILLINGS	.97000
66	LIVESTOCK ABOVE ABSAROKEE	.47000
67	LIVESTOCK ABOVE EDGAR	1.15000
68	LIVESTOCK BILLINGS-MILES CITY	5.00000
69	LIVESTOCK BELOW ST XAVIER	1.15000
70	LIVESTOCK TONGUE RIVER WYO	1.20000
71	LIVESTOCK TONGUE RIVER MT	2.40000
72	LIVESTOCK MILES CITY-SIDNEY	5.00000
73	LIVESTOCK ABOVE ARVADA	.90000
74	LIVESTOCK LITTLE POWDER WYO	.30000
75	LIVESTOCK POWDER RIVER MT.	5.50000

*Lines 1 - 12 - 1,000 AF
13 - 24 - 1,000 AC
25 - 75 - 1,000 AF

Table 11

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEVD DEVELOPMENT LEVEL
WITHOUT SRD AND PUMPING PROJECTS

78/03/16.

YELLOWSTONE RIVER BASIN
INITIAL VALUES AND CONSTANTS*

01	IRR. GROUND W ABOVE LIVINGSTN	4.00000
02	IRR GW LIVINGSTON TO BILLINGS	0.00000
03	IRR GW ABOVE ABSAROKEE	0.00000
04	IRR GW ABOVE EDGAR	10.35000
05	IRR GW BILLINGS TO MILES CTY	1.60000
06	IRR GW BELOW ST XAVIER	.95000
07	IRR GW TONGUE RIVER WY	0.00000
08	IRR GW TONGUE RIVER MT	0.00000
09	IRR GW MILES CITY TO SIDNEY	0.00000
10	IRR GW ABOVE ARVADA	0.00000
11	IRR GW LITTLE POWDER WYO	0.00000
12	IRR GW POWDER MT	0.00000
13	IRR SW ABOVE LIVINGSTON	4.75000
14	IRR SW LIVINGSTON TO BILLINGS	15.94000
15	IRR SW ABOVE ABSAROKEE	.28000
16	IRR SW ABOVE EDGAR	3.47000
17	IRR SW BILLINGS TO MILES CITY	50.46000
18	IRR SW BELOW ST XAVIER	32.73000
19	IRR SW TONGUE RIVER WYO	15.92000
20	IRR SW TONGUE RIVER MT	16.40000
21	IRR SW MILES CITY TO SIDNEY	45.94000
22	IRR SW ABOVE ARVADA	19.70000
23	IRR SW LITTLE POWDER WYO	2.50000
24	IRR SW POWDER MT	15.97000
25	ENERGY ABOVE LIVINGSTON	0.00000
26	ENERGY LIVINGSTON TO BILLINGS	.17300
27	ENERGY ABOVE ABSAROKEE	.52500
28	ENERGY ABOVE EDGAR	0.00000
29	ENERGY BILLINGS TO MILES CITY	43.65000
30	ENERGY BELOW ST XAVIER	0.00000
31	ENERGY TONGUE RIVER WYO	30.31100
32	ENERGY TONGUE RIVER MT	20.91000
33	ENERGY MILES CITY TO SIDNEY	0.00000
34	ENERGY POWDER ABOVE ARVADA	0.00000
35	ENERGY LITTLE POWDER RIVER WY	0.00000
36	ENERGY POWDER RIVER MT.	55.03000
37	MUNICIPAL ABOVE LIVINGSTON	0.00000
38	MUNICIPAL LIVNGSTN TO BILLNGS	6.50000
39	MUNICIPAL ABOVE ABSAROKEE	0.00000
40	MUNICIPAL ABOVE EDGAR	.20000
41	MUNICIPAL BILLINGS TO MILES C	3.20000
42	MUNICIPAL BELOW ST XAVIER	1.10000
43	MUNICIPAL TONGUE RIVER WYO	0.00000
44	MUNICIPAL TONGUE RIVER MT	0.00000
45	MUNICIPAL MILES CITY - SIDNEY	0.00000
46	MUNICIPAL ABOVE ARVADA	0.00000
47	MUNICIPAL LITTLE POWDER RIVER	0.00000
48	MUNICIPAL POWDER RIVER MT	4.52500
49	R DOMESTIC TONGUE RIVER WYO	.20000
50	R DOMESTIC ABOVE ARVADA	5.00000
51	R DOMESTIC LITTLE POWDER R	0.00000
52	INDUSTRIAL ABOVE LIVINGSTON	0.00000
53	INDUSTRIAL LIVINGSTON-BILLING	1.40000
54	INDUSTRIAL ABOVE ABSAROKEE	0.00000
55	INDUSTRIAL ABOVE EDGAR	2.20000
56	INDUSTRIAL BILLINGS-MILES CTY	0.00000
57	INDUSTRIAL BELOW ST XAVIER	0.00000
58	INDUSTRIAL TONGUE RIVER WYO	0.00000
59	INDUSTRIAL TONGUE RIVER MT	0.00000
60	INDUSTRIAL MILES CITY-SIDNEY	.40000
61	INDUSTRIAL ABOVE ARVADA WYO	0.00000
62	INDUSTRIAL LITTLE POWDER WYO	0.00000
63	INDUSTRIAL POWDER RIVER MT.	0.00000
64	LIVESTOCK ABOVE LIVINGSTON	.97000
65	LIVESTOCK LIVINGSTON-BILLINGS	.97000
66	LIVESTOCK ABOVE ABSAROKEE	.97000
67	LIVESTOCK ABOVE EDGAR	1.15000
68	LIVESTOCK BILLINGS-MILES CITY	5.00000
69	LIVESTOCK BELOW ST XAVIER	1.15000
70	LIVESTOCK TONGUE RIVER WYO	1.20000
71	LIVESTOCK TONGUE RIVER MT	2.40000
72	LIVESTOCK MILES CITY-SIDNEY	5.00000
73	LIVESTOCK ABOVE ARVADA	.90000
74	LIVESTOCK LITTLE POWDER WYO	.30000
75	LIVESTOCK POWDER RIVER MT.	5.50000

*Lines 1 - 12 - 1,000 AF
13 - 24 - 1,000 AC
25 - 75 - 1,000 AF

Table 12

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMENDED DEVELOPMENT LEVEL

78/03/15.

WITHOUT HARDIN PROJECT

BIGHORN RIVER BASIN
INITIAL VALUES AND CONSTANTS*

01	IRR SW ABOVE BOYSEN	-.70000
02	IRR SW BOYSEN-KANE	-1.40000
03	IRR SW SHOSHONE ABOVE BYRON	-2.20000
04	IRR SW YELLOWTAIL-ST XAVIER	0.00000
05	IRR SW ABOVE BOYSEN	62.70000
06	IRR SW BOYSEN-KANE	83.70000
07	IRR SW SHOSHONE ABOVE BYRON	93.50000
08	IRR SW YELLOWTAIL-ST XAVIER	1.80000
09	ENERGY ABOVE BOYSEN	0.00000
10	ENERGY BOYSEN-KANE	0.00000
11	ENERGY SHOSHONE ABOVE BYRON	0.00000
12	ENERGY YELLOWTAIL-ST XAVIER	0.00000
13	MUNICIPAL ABOVE BOYSEN	.70000
14	MUNICIPAL BOYSEN-KANE	1.15000
15	MUNICIPAL SHOSHONE ABV BYRON	.50000
16	MUNICIPAL YELLOWTAL-ST XAVIER	0.00000
17	MUN & ABOVE BOYSEN	0.00000
18	MUN & BOYSEN-KANE	0.00000
19	MUN & SHOSHONE ABOVE BYRON	0.00000
20	INDUSTRIAL ABOVE BOYSEN	1.58000
21	INDUSTRIAL BOYSEN-KANE	3.98000
22	INDUSTRIAL SHOSHONE ABV BYRON	7.55000
23	INDUSTRIAL YELLOWTAL-ST XAVIER	0.00000
24	LIVESTOCK ABOVE BOYSEN	2.08000
25	LIVESTOCK BOYSEN-KANE	1.90000
26	LIVESTOCK SHOSHONE ABV BYRON	2.50000
27	LIVESTOCK YELLOWTAL-ST XAVIER	.10000
28	MUNICIPAL ABOVE BUFFALO BILL	.40000
29	INDUSTRIAL ABOVE BUFFALO BILL	.20000
30	BOYSEN MAX RES CONTENT	802.00000
31	BOYSEN MIN RES CONTENT	252.00000
32	BOYSEN START RES CONTENT	600.00000
33	BOYSEN MAX RES. RELEASE	150.00000
34	BUFALO BILL MAX CONTENT	425.90000
35	BUFALO BILL MIN CONTENT	46.20000
36	BUFALO BILL START CONTENT	250.00000
37	BUFALO BILL MAX RELEASE	36.10000
38	BIGHORN MAX RES CONTENT	1116.00000
39	BIGHORN MIN RES CONTENT	483.40000
40	BIGHORN START RES CONTENT	900.00000
41	BIGHORN MAX RES. RELEASE	494.20000
42	BUFFALO BILL CONDUIT MAX	21.50000
43	LIVESTOCK ABOVE BUFFALO BILL	.25000

*Lines 1 - 43 - 1,000 AF

Table 15

YELLOWSTONE LEVEL B OPERATION STUDY
2000 PROJECTED DEVELOPMENT LEVEL

78/03/16.

WITHOUT SRD AND STORAGE PROJECTS

YELLOWSTONE RIVER BASIN
INITIAL VALUES AND CONSTANTS*

01	IRR. GROUND W ABOVE LIVINGSTN	0.00000
02	IRR GR LIVINGSTON TO BILLINGS	0.00000
03	IRR GW ABOVE ABSAROKEE	0.00000
04	IRR GW ABOVE EDGAR	0.00000
05	IRR GW BILLINGS TO MILES CTY	0.00000
06	IRR GW BELOW ST XAVIER	.95000
07	IRR GW TONGUE RIVER WY	0.00000
08	IRR GW TONGUE RIVER MT	0.00000
09	IRR GW MILES CITY TO SIDNEY	0.00000
10	IRR SW ABOVE ARVADA	0.00000
11	IRR SW LITTLE POWDER WYO	0.00000
12	IRR SW POWDER MT	0.00000
13	IRR SW ABOVE LIVINGSTON	3.75000
14	IRR SW LIVINGSTON TO BILLINGS	15.94000
15	IRR SW ABOVE ABSAROKEE	.84000
16	IRR SW ABOVE EDGAR	1.67000
17	IRR SW BILLINGS TO MILES CITY	31.70000
18	IRR SW BELOW ST XAVIER	9.37000
19	IRR SW TONGUE RIVER WYO	15.92000
20	IRR SW TONGUE RIVER MT	3.35000
21	IRR SW MILES CITY TO SIDNEY	53.42000
22	IRR SW ABOVE ARVADA	14.70600
23	IRR SW LITTLE POWDER WYO	2.50000
24	IRR SW POWDER MT	13.47900
25	ENERGY ABOVE LIVINGSTON	0.00000
26	ENERGY LIVINGSTON TO BILLINGS	.17300
27	ENERGY ABOVE ABSAROKEE	.52500
28	ENERGY ABOVE EDGAR	0.00000
29	ENERGY BILLINGS TO MILES CITY	45.65000
30	ENERGY BELOW ST XAVIER	0.00000
31	ENERGY TONGUE RIVER WYO	30.31100
32	ENERGY TONGUE RIVER MT	20.91000
33	ENERGY MILES CITY TO SIDNEY	0.00000
34	ENERGY POWDER ABOVE ARVADA	0.00000
35	ENERGY LITTLE POWDER RIVER WY	0.00000
36	ENERGY POWDER RIVER MT.	53.03000
37	MUNICIPAL ABOVE LIVINGSTON	0.00000
38	MUNICIPAL LIVNGSTN TO BILLINGS	6.50000
39	MUNICIPAL ABOVE ABSAROKEE	0.00000
40	MUNICIPAL ABOVE EDGAR	.20000
41	MUNICIPAL BILLINGS TO MILES C	5.20000
42	MUNICIPAL BELOW ST XAVIER	1.10000
43	MUNICIPAL TONGUE RIVER WYO	0.00000
44	MUNICIPAL TONGUE RIVER MT	0.00000
45	MUNICIPAL MILES CITY - SIDNEY	0.00000
46	MUNICIPAL ABOVE ARVADA	0.00000
47	MUNICIPAL LITTLE POWDER RIVER	0.00000
48	MUNICIPAL POWDER RIVER MT	4.52500
49	M DOMESTIC TONGUE RIVER WYO	.20000
50	M DOMESTIC ABOVE ARVADA	3.00000
51	M DOMESTIC LITTLE POWDER R	0.00000
52	INDUSTRIAL ABOVE LIVINGSTON	0.00000
53	INDUSTRIAL LIVINGSTON-BILLINGS	1.40000
54	INDUSTRIAL ABOVE ABSAROKEE	0.00000
55	INDUSTRIAL ABOVE EDGAR	2.20000
56	INDUSTRIAL BILLINGS-MILES CTY	0.00000
57	INDUSTRIAL BELOW ST XAVIER	0.00000
58	INDUSTRIAL TONGUE RIVER WYO	0.00000
59	INDUSTRIAL TONGUE RIVER MT	0.00000
60	INDUSTRIAL MILES CITY-SIDNEY	.40000
61	INDUSTRIAL ABOVE ARVADA WYO	0.00000
62	INDUSTRIAL LITTLE POWDER WYO	0.00000
63	INDUSTRIAL POWDER RIVER MT.	0.00000
64	LIVESTOCK ABOVE LIVINGSTON	.97000
65	LIVESTOCK LIVINGSTON-BILLINGS	.97000
66	LIVESTOCK ABOVE ABSAROKEE	.47000
67	LIVESTOCK ABOVE EDGAR	1.13000
68	LIVESTOCK BILLINGS-MILES CITY	5.00600
69	LIVESTOCK BELOW ST XAVIER	1.15000
70	LIVESTOCK TONGUE RIVER WYO	1.20000
71	LIVESTOCK TONGUE RIVER MT	2.40000
72	LIVESTOCK MILES CITY-SIDNEY	5.00000
73	LIVESTOCK ABOVE ARVADA	.90000
74	LIVESTOCK LITTLE POWDER WYO	.30000
75	LIVESTOCK POWDER RIVER MT.	3.50000

*Lines 1 - 12 - 1,000 AF
13 - 24 - 1,000 AC
25 - 75 - 1,000 AF

Table 14

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD & HARDIN PROJECT

78/03/16.

YELLOWSTONE RIVER BASIN
INITIAL VALUES AND CONSTANTS*

01	IRR. GROUND W ABOVE LIVINGSTN	0.00000
02	IRR GW LIVINGSTON TO BILLINGS	0.00000
03	IRR GW ABOVE ABSAROKEE	0.00000
04	IRR GW ABOVE EDGAR	10.35000
05	IRR GW BILLINGS TO MILES CTY	1.60000
06	IRR GW BELOW ST XAVIER	.45000
07	IRR GW TONGUE RIVER WY	0.00000
08	IRR GW TONGUE RIVER MT	0.00000
09	IRR GW MILES CITY TO SIDNEY	0.00000
10	IRR GW ABOVE ARVADA	0.00000
11	IRR GW LITTLE POWDER WYO	0.00000
12	IRR GW POWDER MT	0.00000
13	IRR SW ABOVE LIVINGSTON	4.75000
14	IRR SW LIVINGSTON TO BILLINGS	15.94000
15	IRR SW ABOVE ABSAROKEE	.28000
16	IRR SW ABOVE EDGAR	3.47000
17	IRR SW BILLINGS TO MILES CITY	9.57000
18	IRR SW BELOW ST XAVIER	37.90000
19	IRR SW TONGUE RIVER WYO	15.92000
20	IRR SW TONGUE RIVER MT	16.40000
21	IRR SW MILES CITY TO SIDNEY	53.42000
22	IRR SW ABOVE ARVADA	19.70000
23	IRR SW LITTLE POWDER WYO	2.50000
24	IRR SW POWDER MT	13.97000
25	ENERGY ABOVE LIVINGSTON	0.00000
26	ENERGY LIVINGSTON TO BILLINGS	.17300
27	ENERGY ABOVE ABSAROKEE	.52500
28	ENERGY ABOVE EDGAR	0.00000
29	ENERGY BILLINGS TO MILES CITY	43.65000
30	ENERGY BELOW ST XAVIER	0.00000
31	ENERGY TONGUE RIVER WYO	30.31160
32	ENERGY TONGUE RIVER MT	20.91000
33	ENERGY MILES CITY TO SIDNEY	0.00000
34	ENERGY POWDER ABOVE ARVADA	0.00000
35	ENERGY LITTLE POWDER RIVER WY	0.00000
36	ENERGY POWDER RIVER MT.	55.03000
37	MUNICIPAL ABOVE LIVINGSTON	0.00000
38	MUNICIPAL LIVNGSTN TO BILLNGS	6.50000
39	MUNICIPAL ABOVE ABSAROKEE	0.00000
40	MUNICIPAL ABOVE EDGAR	.20000
41	MUNICIPAL BILLINGS TO MILES C	5.20000
42	MUNICIPAL BELOW ST XAVIER	1.10000
43	MUNICIPAL TONGUE RIVER WYO	0.00000
44	MUNICIPAL TONGUE RIVER MT	0.00000
45	MUNICIPAL MILES CITY - SIDNEY	0.00000
46	MUNICIPAL ABOVE ARVADA	0.00000
47	MUNICIPAL LITTLE POWDER RIVER	0.00000
48	MUNICIPAL POWDER RIVER MT	4.52500
49	M DOMESTIC TONGUE RIVER WYO	.26000
50	M DOMESTIC ABOVE ARVADA	3.00000
51	M DOMESTIC LITTLE POWDER M	0.00000
52	INDUSTRIAL ABOVE LIVINGSTON	0.00000
53	INDUSTRIAL LIVINGSTON-BILLING	1.40000
54	INDUSTRIAL ABOVE ABSAROKEE	0.00000
55	INDUSTRIAL ABOVE EDGAR	2.20000
56	INDUSTRIAL BILLINGS-MILES CTY	0.00000
57	INDUSTRIAL BELOW ST XAVIER	0.00000
58	INDUSTRIAL TONGUE RIVER WYO	0.00000
59	INDUSTRIAL TONGUE RIVER MT	0.00000
60	INDUSTRIAL MILES CITY-SIDNEY	.40000
61	INDUSTRIAL ABOVE ARVADA WYO	0.00000
62	INDUSTRIAL LITTLE POWDER WYO	0.00000
63	INDUSTRIAL POWDER RIVER MT.	0.00000
64	LIVESTOCK ABOVE LIVINGSTON	.97000
65	LIVESTOCK LIVINGSTON-BILLINGS	.97000
66	LIVESTOCK ABOVE ABSAROKEE	.97000
67	LIVESTOCK ABOVE EDGAR	1.15000
68	LIVESTOCK BILLINGS-MILES CITY	3.00000
69	LIVESTOCK BELOW ST XAVIER	1.15000
70	LIVESTOCK TONGUE RIVER WYO	1.20000
71	LIVESTOCK TONGUE RIVER MT	2.40000
72	LIVESTOCK MILES CITY-SIDNEY	5.00000
73	LIVESTOCK ABOVE ARVADA	.90000
74	LIVESTOCK LITTLE POWDER WYO	.40000
75	LIVESTOCK POWDER RIVER MT.	3.50000

*Lines 1 - 12 - 1,000 AF
13 - 24 - 1,000 AC
25 - 75 - 1,000 AF

section. The plans recommended by the Study Teams for both Wyoming and Montana proposed many onstream and offstream storage reservoirs. Most of the reservoirs would contain only small volumes of storage. Some hand operation studies of these proposed reservoirs were received from the States and some were done by the Bureau of Reclamation. Because these studies indicated little changes in the monthly flow pattern in their respective stream, these reservoirs were considered run-of-the-river reservoirs. Therefore, in the computer operation studies for Level B, a depletion for reservoir evaporation and for the irrigation or energy development under each proposed development was made without operating each proposed reservoir. Table 15 shows the average evaporation for an average surface area for each proposed reservoir.

Water quality equations, from which new total dissolved solids concentrations were derived in relation to new computed flows, were found in the Yellowstone River Basin and Adjacent Coal Area - Level B Study, Montana, Wyoming, North Dakota - 1975 Surface Water Quality Conditions based on 1975 Level Depleted Flows. This report included water quality analyses for stations in North Dakota, Wyoming, and Montana. The limitations of historical data, however, prevented looking at surface water quality at all the stations found in Figure 1. Six river gaging stations used in the operation study had adequate historical data to develop flow versus TDS regression equations. The six stations, Yellowstone River at Billings, Miles City, and Sidney; Tongue River at Miles City; Shoshone River

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HYDROGRAPHIC DISCHARGE DATA

Table 15

Run-off of Reservoir Evaporations[1/] Unit 1000 AF

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Average Surface Area	PROJECTS												
	Flathead Creek and Pryor Creek												
200	.008	.008	.016	.022	.039	.044	.08	.06	.039	.012	.026	.006	.36
700	.028	.028	.056	.077	.137	.154	.280	.210	.137	.042	.091	.021	1.26
	Elbow Creek and Blue Water												
394	.008	.012	.02	.047	.087	.130	.213	.229	.162	.083	.047	.012	1.048
310	.006	.009	.016	.037	.068	.102	.167	.180	.127	.065	.037	.011	.825
	Modified Tongue and Shutts Flats - South Fork												
1000	.06	.08	.10	.12	.22	.33	.56	.49	.29	.26	.10	.07	2.68
						.044	.054	.048	.043				.189
	Hole-in-the-Wall, Crazy Woman and Clear Creek												
1040	.05	.05	.07	.17	.25	.36	.52	.52	.35	.30	.10	.05	2.79
100							.1	.1					.2
4060	.25	.34	.29	.76	1.01	1.3	1.93	1.93	1.22	1.26	.55	.34	10.93
TOTAL													
MEAN													
PERCENT													

1/ Reservoir Evaporations are based on average reservoir surface area acres and unit reservoir evaporation rates (acre-feet/acre).

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at Lovell; and Greybull River at Basin were used to predict the river TDS for the various levels of development presented by the State Study Teams. The regression equations used are listed in Tables 16 through 19.

Instream flow requests were checked in the operation study against the new computed flows. The instream flow requests were from two sources, Application for Reservation of Water in the Yellowstone River Basin by Montana Fish and Game Commission, Helena, Montana, November 1976, and a letter containing reservation requests from the Department of Health and Environmental Sciences. These requests are also found in Chapter VI of the Report on the Yellowstone Basin and Adjacent Coal Area Level B Study for Montana, Volumes 2, 3, 4, and 5. Table 20 lists these monthly requests. No instream flow requests were received from Wyoming.

Table 16

REGRESSION EQUATIONS, TDS versus FLOWS
YELLOWSTONE RIVER AT BILLINGS

Month	Equation
Jan	log TDS = 3,16424 - ,12912 log Q
Feb	log TDS = 3,54116 - ,20614 log Q
Mar	TDS = 1527,71 - 235,17461 log Q
Apr	log TDS = 4,24384 - ,34054 log Q
May	TDS = 924,22705 - 131,16983 log Q
Jun	log TDS = 2,57791 - ,08230 log Q
Jul	TDS = 935,46143 - 135,05623 log Q
Aug	log TDS = 4,27605 - ,35261 log Q
Sep	TDS = 1622,26001 - 251,31508 log Q
Oct	log TDS = 5,05812 - ,48689 log Q
Nov	TDS = 2255,61938 - 368.94141 log Q
Dec	TDS = 2119.83569 - 346,26465 log Q
All Months	log TDS = 4,82194 - ,44798 log Q

TDS = Average Monthly Total Dissolved Solids, mg/l

Q = Monthly Discharge, acre-feet

Table 17

REGRESSION EQUATIONS, TDS versus FLOWS

GREYBULL RIVER AT BASIN

$$TDS = 661 - .419\ Q$$

where Q = monthly flow in ft^3/s

TDS = concentration of Total Dissolved Solids, mg/l

SHOSHONE RIVER NEAR LOVELL

$$TDS = 586.83 - .030\ Q$$

where Q = monthly flow in ft^3/s

TDS = concentration of Total Dissolved Solids, mg/l

YELLOWSTONE RIVER AT MILES CITY

The regression equation between Q at Sidney and Q at Miles City was used to obtain Q at Sidney. The equation is:

$$Q_{SD} = 1.388 + 1.126\ Q_{MC}$$

where Q_{SD} = discharge at Sidney, 1000 AF

Q_{MC} = discharge at Miles City, 1000 AF

Q_{SD} and the appropriate monthly TDS - Q relationship for the Yellowstone River near Sidney (Table 18) were used to obtain TDS for Sidney.

The regression equation between TDS at Miles City and TDS at Sidney was used to obtain TDS at Miles City.

$$TDS_{MC} = 25.7 + .9598\ TDS_{SD}$$

where TDS_{MC} = average monthly TDS of Yellowstone River near Miles City

and TDS_{SD} = average monthly TDS of Yellowstone River near Sidney

Table 18

REGRESSION EQUATIONS, TDS versus FLOWS
TONGUE RIVER NEAR MILES CITY

Month	Equation
Jan	log TDS = 2.968046 - .00001178 Q
Feb	log TDS = 2.8869196 - .0000093196 Q
Mar	TDS = 1445.71 - 217.25081 log Q
Apr	TDS = 1524.68 - 217.70712 log Q
May	TDS = 1348.75 - 191.64864 log Q
Jun	TDS = 1221.21 - 189.03383 log Q
Jul	TDS = 1513.50 - 260.79199 log Q
Aug	TDS = 1686.28 - 301.87476 log Q
Sep	log TDS = 3.51775 - .20078 log Q
Oct	TDS = 1647.14 - 265.4541 log Q
Nov	log TDS = 3.69492 - .21753 log Q
Dec	TDS = 2375.20 - 408.74805 log Q
All Months	TDS = 1672.10 - 267.88599 log Q

TDS = Average Monthly Total Dissolved Solids, mg/l

Q = Monthly Discharge, acre-feet

Table 19

REGRESSION EQUATIONS, TDS versus FLOWS
YELLOWSTONE RIVER NEAR SIDNEY

Month	Equation
Jan	log TDS = 4.45663 - .2983 log Q
Feb	TDS = 2469.44 - 339.72412 log Q
Mar	TDS = 2785.62 - 392.1665 log Q
Apr	log TDS = 2.864506 - .0000001684 Q
May	TDS = 561.71 - 0.00017959 Q
Jun	TDS = 198.98 + 0.00003539 Q
Jul	TDS = 917.41 - 101.69644 log Q
Aug	TDS = 2303.31 - 327.66333 log Q
Sep	log TDS = 2.85842 - .0000002973 log Q
Oct	TDS = 3745.50 - 561.71338 log Q
Nov	TDS = 3852.08 - 579.99414 log Q
Dec	TDS = 863.67 - .00061612 Q
All Months	TDS = 2827.38 - 403.47119 log Q

TDS = Average Monthly Total Dissolved Solids, mg/l

Q = Monthly Discharge, acre-feet

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HYDROGRAPHIC DISCHARGE DATA

Table 20

Run-off of Instream Flow Requests Unit 1000 AF

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
					MONTANA FISH AND GAME COMMISSION REQUESTS								
Yellowstone River - Sidney													
	301	332	676	654	833	2427	937	431	417	431	417	351	
Yellowstone River - Miles City													
	295	309	676	654	773	2272	857	431	417	431	417	344	
Yellowstone River - Billings													
	154	139	178	214	515	1147	578	295	220	221	208	172	
Yellowstone River - Livingston													
						490	237						
Stillwater River - Absarokee													
	14	13	14	13	34	124	91	46	38	27	13	13	
Clarks Fork of Yellowstone - Edgar													
	15	13	15	23	66	173	86	29	24	25	20	16	
Bighorn River - St. Xavier													
	203	179	264	214	226	309	214	172	155	166	185	197	
TOTAL													
MEAN													
PERCENT													

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HYDROGRAPHIC DISCHARGE DATA

Table 20 (cont.)

Run-off of Instream Flow Requests Unit 1000 AF Drainage Area _____ Sq.Miles

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	PERCENT MEAN
Tongue River Miles City														
	11.7	10.6	32.3	3.12	36.9	35.7	25.0	13.8	11.3	11.7	11.3	11.7		
Powder River at Locate														
	4.9	4.4	30.7	29.8	49.2	47.6	12.3	2.5	2.4	4.9	4.8	4.9		
MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES REQUESTS														
Yellowstone River - Sidney														
	780	627	673	983	344	202	209	319	536	600	602	590		
Yellowstone River - Miles City														
	512	404	453	665	172	167	172	204	359	439	444	457		
Yellowstone River - Billings														
	400	217	210	197	65	63	65	160	227	237	230	211		
TOTAL														
MEAN														
PERCENT														

CRITERIA

Irrigation Depletions and Monthly Distribution

Montana

The calculations used to compute the irrigation depletions for the Without Plan and Recommended Plan for Montana are defined in the following discussion.

The depletions were computed for the different planning areas based on the area's temperature, cropping patterns and evaporation rates. This data came from Bureau of Reclamation planning studies in the planning area. Table 21 is an example of how irrigation depletions were computed. The first five lines of this example show how the monthly distributions were established for depletions. Various Bureau of Reclamation Definite Plan Reports (DPR) were investigated for information concerning diversion and return flow patterns for different areas throughout the Yellowstone Basin. From these, monthly distributions could be established.

Line 1 - A monthly distribution in percent for diversions. Based on information from a DPR for the respective drainage basin.

Line 2 - Shows monthly diversion requirement in acre-feet per acre (AF/AC) from the DPR.

Line 3 - A monthly distribution in percent for return flows. Based on information from a DPR for the respective drainage basins.

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HYDROGRAPHIC DISCHARGE DATA

Table 21

Run-off of Irrigation Depletions Unit Drainage Area Sq.Miles

YEAR	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	TOTAL	LINE NO.
						TYPICAL AREA								
Irrigation Diversion (%)							7	12	21	27	20	13	100	(1) 1/
Divr Rate (AF/AC)							.29	.45	.81	1.05	.77	.50	3.87	(2) 1/
Return Flow (%)	9	7	5	4	3	3	4	8	14	16	15	12	100	(3) 1/
Return Flow Rate (AC/AF)	.13	.10	.07	.06	.04	.04	.06	.12	.21	.23	.22	.18	1.46	(4) 1/
Irr Depl (AF/AC)	-.13	-.10	-.07	-.06	-.04	-.04	.23	.33	.60	.82	.55	.32	2.41	(5)
					IRRIGATION DEPLETIONS BY AREA (AF/AC)									
Yellowstone River Main Stem - Livingston to Sidney														
	-.023	-.087	-.070	-.052	-.035	-.052	.007	.273	.336	.771	.655	.407	2.3	(6)
Stillwater and Clarks Fork of Yellowstone River														
	.14	-.11	-.08	-.06	-.04	-.04	.17	.45	.46	.82	.68	.33	2.72	(7)
Bighorn River														
	-.15	-.12	-.09	-.07	-.05	-.05	-.07	.12	.55	.83	.89	.37	2.07	(8)
Tongue and Powder Rivers														
	-.10	-.08	-.06	-.05	-.03	-.03	-.05	.33	.32	.69	.61	.31	1.86	(9)
TOTAL														
MEAN														
PERCENT														

1/ Taken from Bureau of Reclamation Definite Plan Reports.

Line 4 - Shows monthly return flows in AF/AC from the DPR.

Line 5 - Difference between Line 4 and Line 2. Shows depletions from DPR information.

Line 6 - Shows monthly distribution of depletions for the Yellowstone River Mainstem - Livingston to Sidney.

Line 7 - Shows monthly distribution of depletions for the Stillwater and Clarks Fork of Yellowstone River.

Line 8 - Shows monthly distribution of depletions for the Bighorn River.

Line 9 - Shows monthly distribution of depletions for the Tongue and Powder Rivers.

Wyoming

The irrigation depletions used were those developed by the Wyoming State Study Team. Total depletion values for irrigation were presented in two forms, acre-feet/year for the Recommended Plan and total acres to be irrigated annually for the Without Plan of Development. The procedure used in the distribution of the depletion in acre-feet/year was to develop percents for each month based on acre-feet/acre depletions on Lines 8 and 9 in Table 21. The monthly percents are shown in Table 22. The depletion acreages were distributed monthly according to the acre-feet/acre depletion rates.

Wyoming has both groundwater and surface water irrigation development. The monthly distribution percents are presented in Table 22 for

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HYDROGRAPHIC DISCHARGE DATA

Table 22

Run-off of Percents Used To Determine Irrigation Depletions

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
BIGHORN RIVER BASIN													
Irr Divr (AF/AC)					.26	.79	1.10	1.06	.57				3.78
Ret Flow (AF/AC)	.07	.05	.05	.07	.14	.24	.27	.26	.20	.15	.12	.09	1.71
Irr Depl (AF/AC)	-.07	-.05	-.05	-.07	.12	.55	.83	.80	.37	-.15	-.12	-.09	2.07
Irr Depl (%)	-3	-2	-3	-4	6	27	40	38	18	-7	-6	-4	100
TONGUE - POWDER RIVER BASIN													
Irr Divr (AF/AC)					.42	.48	.88	.78	.45				3.01
Ret Flow (AF/AC)	.05	.03	.03	.05	.09	.16	.19	.17	.14	.10	.08	.06	1.15
Irr Depl (AF/AC)	-.05	-.03	-.03	-.05	.33	.32	.69	.61	.31	-.10	-.08	-.06	1.86
Irr Depl (%)	-3	-2	-2	-3	18	17	37	33	17	-5	-4	-3	100
GROUNDWATER ALL BASIN AREAS													
Percent	4	3	3	4	8	14	16	15	12	9	7	5	100
TOTAL													
MEAN													
PERCENT													

groundwater irrigation. This distribution is the percent return flow used for surface water return and taken from the Hanover Bluff Unit Definite Plan Report, U. S. Bureau of Reclamation.

Energy Depletions and Monthly Distribution

Montana and Wyoming

Depletions for energy's use of water within the study area boundaries were received from the State Study Teams as an annual depletion in acre-feet/year. These annual depletions were distributed monthly based on the following percents:

Month	Percent
January	8
February	7
March	8
April	8
May	9
June	9
July	10
August	10
September	7
October	8
November	8
December	8
	100

Municipal Depletions and Monthly Distribution

Montana and Wyoming

The State Study Teams projected annual depletions for future municipal water uses within the study area boundaries was distributed montly based on the percents below:

Month	Percent
January	3
February	3
March	6
April	7
May	10
June	10
July	21
August	14
September	9
October	9
November	4
December	4
	100

Industrial Depletions and Monthly Distribution

Montana and Wyoming

The State Study Teams' projected annual depletions for future industrial uses of water within the study area boundaries were distributed monthly based on the following percents:

Month	Percent
January	8
February	7
March	8
April	8
May	9
June	9
July	10
August	10
September	7
October	8
November	8
December	8
	100

Livestock Depletions and Monthly Distribution

Montana and Wyoming

The State Study Team provided annual depletion information in acre-feet/year. Part of the reported depletions were direct consumption and the rest evaporation. In the operation studies it was assumed these depletions would come from stockponds and would be depleted from the natural flow of a river or stream during the spring runoff when the stockponds filled. Thus, 50 percent of the livestock depletions were effected from the river system in May and the other 50 percent in June.

Additional Information and Reservoir Operating Criteria

Information on evaporation rates were obtained from three sources:

1. The Climatic Atlas of the United States.
2. The MRB Comprehensive Framework Study Volume 6, Plate 10.
3. Various Definite Plan Reports.

The evaporation figures used were based on the best available information for each river basin. Various evaporation rates were used in each river basin based on the location.

Three major existing reservoirs were operated in using 1975 operating criteria and appropriate inflows. The basic operating criteria of Boysen Reservoir were as follows:

1. Starting in October, estimate uniform release through January to end with a content of 580,000 acre-feet.
2. Release in February that quantity equal to January releases.
3. Assume 100 percent runoff forecast on March 1 makes uniform releases to fill at end of July with maximum release for the month of March not greater than 135,000 acre-feet.
4. In July, do not exceed full content of 802,000 acre-feet.
5. In August and September, release inflow but not less than 72,000 acre-feet in August and 71,400 acre-feet in September.

Operating criteria used for Buffalo Bill were as follows:

1. After the reservoir peaks in June and July, release irrigation requirements through September.
2. In October, release at uniform rate to reach 200,000 acre-feet of storage by the end of January, but release no less than irrigation demands or powerplant capability.
3. Assume 100 percent forecast in February to fill in June but do not spill until April and spill mostly in June. Hold releases so the minimum storage in April is 169,000 acre-feet.
4. Make minimum river releases at dam of 50 ft^3/s and 200 ft^3/s at Heart Mountain Powerplant.
5. The maximum reservoir content is 423,900 acre-feet.

The operating criteria of Bighorn Lake were as follows:

1. Make uniform releases January through March to bring reservoir storage down to 805,000 acre-feet and assuming 100 percent forecast on inflow.
2. Make uniform releases April through June to fill in June and assume 90 percent forecast on inflow.
3. With maximum storage at 1,116,000 acre-feet make releases in July to bring storage down to 1,068,000 acre-feet.
4. For the months August through December, release inflows plus that portion of water to draw the reservoir down to 980,000 acre-feet in December.

5. Minimum monthly power releases are made to hold a firm power output January through December of 40.3, 40.0, 44.6, 45.2, 41.4, 44.1, 42.0, 44.7, 45.2, 53.9, 51.6 and 44.1 million killowatt hours, respectively.

The future reservoirs that were proposed by the State Study Teams were operated as run-of-the-river reservoirs (as discussed in the Method Section of this report). Depletions for evaporation were made based on evaporation rates and average sufrace area of the reservoirs.

RESULTS

The depleted flows generated by the operation study are shown in the tables in the Water Quantity Section following this discussion. The tables include a computed flow record for each of the stations listed in Table 1 plus inflows to Boysen, Buffalo Bill and Yellowtail Reservoirs. Flows at each of the stations were computed for the following development levels furnished by the State Study Teams:

1. 1975 Development Levels
2. 1985 Without Development Level
3. 2000 Without Development Level
4. 1985 Recommended Development Level
5. 2000 Recommended Development Level
6. 2000 Recommended Development Level without SRD Projects
7. 2000 Recommended Development Level without SRD and Pumping Projects
8. 2000 Recommended Development Level without SRD and Storage Projects
9. 2000 Recommended Development Level without SRD and Hardin Projects

The term SRD refers to State Regional Development Account and simply refers to those irrigation projects that were economically feasible under this account.

Table 23 lists the average annual flows for the various plans and

Table 23

ANNUAL FLOW AND DEPLETION FOR VARIOUS PLANS
(1,000 acre-feet)

Plan	Yellowstone at Sidney		Yellowstone at Miles City		Yellowstone at Billings	
	Flows	Depletion	Flows	Depletion	Flows	Depletion
1975 Development Level	8,741.2		8,308.8		5,272.7	
1985 Without Development Level	8,569.3	171.9	8,199.9	108.9	5,250.0	22.7
2000 Without Development Level	8,288.2	453.0	8,033.0	275.8	5,211.6	61.1
1985 Recommended Development Level	8,428.8	312.4	8,068.2	240.6	5,239.1	33.6
2000 Recommended Development Level	7,832.2	909.9	7,639.2	669.6	5,188.7	84.0
2000 Recommended Development Level without SRD Projects	7,910.8	830.4	7,680.9	627.9	5,188.7	84.0
2000 Recommended Development Level without SRD and Pumping Projects	7,944.9	796.3	7,699.6	609.2	5,188.7	84.0
2000 Recommended Development Level without SRD and Storage Projects	8,035.3	705.9	7,807.8	501.0	5,214.2	58.5
2000 Recommended Development Level without SRD and Hardin Projects	7,991.3	749.9	7,662.8	646.0	5,188.7	84.0

shows the depletion between 1975 development and each plan for three stations in the Yellowstone Basin. Similar analyses were made for other stations but are not shown. The three stations, Sidney, Miles City, and Billings, show maximum depletions for the 2000 Recommended Development Level Plan. These depletions are 10, 8, and 1.6 percent of the 1975 Development Level flows, respectively.

Other data listed in the appended tables are the maximum, minimum, average, and median flows and that flow which occurs in the river 80, 60, 40, and 20 percent of the time. Other results referring to actual depletion of flows, reservoir operations, and instream flow needs are found in backup data for this study.

Results from the water quality computation, determined by using the regression equations relating TDS versus flows, are found in the tables in the Water Quality Section. Table 24 lists the predicted TDS (mg/1) for the various plans and three Yellowstone River stations. The stations, Sidney, Miles City, and Billings, indicated flow depletions of 10, 8, and 1.6 percent for the 2000 Recommended Development Level Plan, respectively. Likewise, TDS increased with decreased flows for the 2000 Recommended Devleopment Level Plan 4, 4, and 1 percent, respectively, or 20.3, 14.8, and 1.5 mg/1 from 1975 TDS water quality values. Other stations that have tabulated water quality results are Tongue River, Greybull River, and Shoshone River.

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Table 24

PREDICTED TDS FOR VARIOUS PLANS
(Average Annual TDS-mg/l)

Plan	Yellowstone at Sidney		Yellowstone at Miles City		Yellowstone at Billing	
	TDS	Difference	TDS	Difference	TDS	Difference
1975 Development Level	468.2		411.1		199.8	
1985 Without Development Level	471.9	3.7	413.4	2.3	200.2	.4
2000 Without Development Level	478.1	9.9	417.1	6.0	200.9	1.1
1985 Recommended Development Level	474.9	6.7	416.3	5.2	200.4	.6
2000 Recommended Development Level	488.5	20.3	425.9	14.8	201.3	1.5
2000 Recommended Development Level without SRD Projects	486.6	18.4	424.9	13.8	201.3	1.5
2000 Recommended Development Level without SRD and Pumping Projects	485.8	17.6	424.5	13.4	201.3	1.5
2000 Recommended Development Level without SRD and Storage Projects	483.7	15.5	422.0	10.9	200.9	1.1
2000 Recommended Development Level without SRD and Hardin Projects	484.7	16.5	423.0	11.9	201.3	1.5

WATER QUANTITY

1975

DEVELOPMENT LEVEL

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 WITHOUT DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER AT LIVINGSTON

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	81.8	67.6	87.3	150.4	541.6	499.6	319.3	163.9	108.0	102.2	75.6	66.0	2263.3
1940	56.2	54.9	70.7	94.1	457.4	578.3	250.6	121.1	93.5	95.5	77.5	71.7	2021.7
1941	67.5	61.1	67.7	73.5	329.8	430.3	237.7	157.7	144.1	171.5	130.6	109.7	2001.2
1942	86.7	75.7	80.3	157.6	317.4	698.8	474.9	191.2	118.8	99.7	88.1	78.5	2467.7
1943	69.4	61.8	83.1	199.8	428.2	1103.5	824.8	316.9	174.7	128.5	101.7	84.8	3577.2
1944	74.0	68.3	71.4	78.3	296.8	593.9	386.9	176.1	125.8	114.3	93.7	73.3	2150.8
1945	64.9	52.6	65.2	72.2	258.3	667.0	588.3	271.2	172.9	147.2	117.7	92.5	2570.0
1946	87.8	73.8	89.0	200.6	398.1	637.5	331.4	168.4	119.2	114.3	96.9	84.2	2401.2
1947	65.5	62.3	77.3	96.7	541.6	795.3	551.6	272.9	176.1	150.1	115.5	97.5	3002.4
1948	83.4	77.5	79.7	99.5	543.5	1023.5	432.1	226.4	132.8	111.1	92.9	72.7	2975.1
1949	59.0	56.1	68.8	189.4	578.0	741.6	393.2	199.9	131.0	125.0	99.5	72.4	2673.9
1950	55.3	54.5	56.8	93.0	262.3	879.6	701.3	287.7	180.3	164.7	136.1	115.2	2986.8
1951	94.7	76.1	82.9	123.5	517.6	710.1	582.7	331.8	185.6	189.4	113.5	86.7	3044.6
1952	72.5	68.7	76.1	171.4	630.4	837.7	407.6	219.0	128.7	101.0	78.2	71.4	2862.7
1953	73.0	62.9	69.7	83.1	198.5	737.6	461.8	195.4	120.9	100.9	87.9	72.8	2264.5
1954	60.5	55.7	60.1	92.6	496.1	682.1	562.7	235.1	141.1	104.1	88.6	75.0	2653.7
1955	68.3	56.9	71.2	78.0	237.0	609.1	359.6	195.2	119.2	108.1	93.1	85.3	2041.0
1956	85.3	76.4	85.6	130.2	566.4	1098.5	512.3	226.4	132.8	114.5	95.0	79.8	3203.2
1957	66.2	61.8	78.8	78.4	418.0	898.0	496.7	223.5	140.0	117.9	95.2	82.2	2756.7
1958	66.4	60.7	75.7	80.1	473.6	587.6	256.5	153.7	101.2	81.9	83.5	80.0	2060.9
1959	63.3	58.4	61.9	86.1	234.0	957.1	475.2	199.9	128.1	129.6	101.1	90.5	2575.2
1960	79.5	71.4	91.3	114.4	265.3	631.3	251.1	148.5	99.0	94.2	86.9	75.1	2008.0
1961	65.2	60.6	68.9	70.2	261.1	619.2	224.5	126.3	120.6	140.3	119.2	93.3	1969.4
1962	83.5	86.0	91.3	175.7	508.9	908.2	544.6	258.1	148.4	124.0	107.7	95.8	3132.2
1963	65.6	79.7	77.7	83.1	417.8	859.1	419.6	193.6	136.5	114.2	99.1	82.8	2628.8
1964	65.0	55.6	55.5	84.7	364.1	877.7	636.1	259.6	152.3	117.2	101.4	90.3	2659.5
1965	85.8	73.8	81.2	116.9	361.7	1162.2	790.6	329.2	203.5	174.6	128.8	101.2	3609.5
1966	81.5	66.3	80.8	106.6	420.0	532.1	288.2	153.6	114.2	103.4	86.6	77.3	2110.6
1967	74.5	71.7	82.1	84.6	371.5	1124.2	785.2	279.9	155.3	141.5	113.3	92.5	3376.3
1968	79.9	82.0	92.6	96.2	280.3	1041.2	612.7	322.7	224.3	182.9	135.2	106.0	3256.0
1969	87.6	91.7	98.0	165.5	675.7	707.2	495.0	219.4	131.1	123.0	103.3	89.4	2986.9
1970	80.0	75.1	82.8	81.5	411.4	1091.1	606.6	246.8	177.0	146.9	116.9	101.5	3217.6
1971	90.3	91.1	96.6	110.1	484.4	1215.1	811.9	320.2	195.2	162.1	128.7	98.6	3804.3
1972	87.7	81.5	103.3	117.1	425.8	1187.4	566.1	265.7	202.9	191.6	139.9	109.8	3478.8
1973	99.9	86.0	90.3	88.0	356.8	668.7	353.8	188.7	136.8	126.3	112.1	92.5	2399.9
1974	73.3	68.0	82.3	133.1	379.8	1340.2	743.3	298.5	162.8	137.1	103.7	87.2	3609.3
1975	69.3	63.5	82.8	84.2	205.6	821.4	920.7	314.4	181.6	0.0	0.0	0.0	2743.5
AVERAGE	74.6	68.6	78.8	110.8	403.1	824.7	504.3	228.6	146.9	124.6	101.2	84.7	2750.9
MEDIAN	73.3	68.0	79.7	96.2	411.4	741.6	475.2	219.4	136.5	123.0	101.1	85.3	2673.9
80 PERCENTILE	65.0	56.1	68.8	80.1	265.3	609.1	319.3	163.9	119.2	102.2	87.9	73.3	2110.6
60 PERCENTILE	68.3	62.3	76.1	88.0	364.1	698.8	419.6	195.4	131.0	114.3	95.2	82.2	2570.0
40 PERCENTILE	79.9	71.7	82.1	110.1	425.9	877.7	544.6	235.1	148.4	128.5	103.7	90.3	2975.1
20 PERCENTILE	85.5	77.5	89.0	149.4	517.6	1091.1	612.7	279.9	176.1	149.4	117.7	97.5	3217.6
MAXIMUM	99.9	91.7	103.3	200.6	675.7	1340.2	824.8	331.8	224.3	191.6	139.9	115.2	3804.3
MINIMUM	55.3	48.4	55.5	70.2	198.5	430.3	224.5	121.1	93.5	81.9	75.6	66.0	1969.4

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 WITHOUT DEVELOPMENT LEVEL

78/02/17.

STILLWATER RIVER AT ABSAROKEE

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	19.6	11.7	17.0	20.1	96.9	91.7	60.8	26.2	15.8	18.1	15.0	12.1	405.0
1940	13.2	12.2	11.1	18.2	101.7	204.5	71.3	25.4	24.6	27.5	18.6	16.1	544.4
1941	18.7	11.3	13.2	16.9	87.0	169.4	90.0	52.7	64.8	52.7	30.3	25.2	632.2
1942	25.5	15.2	15.7	30.8	102.2	209.0	201.3	50.7	30.3	32.4	25.9	22.6	761.6
1943	19.6	18.5	28.6	70.6	109.2	289.8	271.6	82.1	52.3	35.4	25.8	20.9	1024.4
1944	13.6	10.1	15.9	18.4	105.2	280.7	220.5	61.0	45.2	33.3	25.8	20.9	850.6
1945	18.3	15.1	18.2	23.1	60.8	211.8	225.5	74.1	43.1	30.7	25.4	19.9	766.0
1946	19.0	15.4	19.6	29.7	60.6	172.6	116.1	39.8	32.8	31.9	24.0	20.5	582.0
1947	19.6	15.2	25.1	34.5	125.8	185.7	192.6	62.5	44.4	43.1	27.5	21.7	797.7
1948	17.2	17.7	21.2	26.6	119.7	274.4	131.3	65.4	28.5	25.9	22.0	18.8	768.7
1949	15.2	10.4	16.1	28.0	113.5	172.0	97.1	37.9	33.1	29.4	22.0	16.5	591.2
1950	11.2	13.6	16.8	20.2	51.9	207.7	187.9	63.1	45.5	38.4	30.0	23.3	709.8
1951	20.8	18.4	19.9	26.0	95.8	137.9	179.2	84.6	38.7	34.7	25.4	19.0	700.4
1952	16.2	14.3	17.5	40.5	138.2	225.2	135.3	71.8	35.2	25.0	22.3	19.4	760.9
1953	17.6	15.1	15.3	19.8	46.1	180.2	136.9	55.7	28.7	21.4	20.7	18.2	575.7
1954	13.8	15.7	18.1	20.1	97.7	125.6	156.9	44.5	23.8	26.2	22.7	16.0	581.1
1955	12.9	12.0	12.7	21.9	47.3	149.0	97.4	36.5	21.8	23.1	18.5	19.0	472.1
1956	17.6	14.5	22.1	26.3	140.5	233.1	106.9	53.3	28.1	24.0	22.2	22.9	711.5
1957	13.4	12.2	14.3	19.5	139.8	342.4	227.2	58.2	41.0	33.0	28.9	24.1	954.0
1958	19.9	16.5	16.3	19.6	147.0	171.3	85.9	51.4	32.6	25.6	24.3	22.7	633.1
1959	18.6	15.1	19.4	24.3	56.8	266.8	128.7	43.8	26.6	32.0	28.1	21.9	682.1
1960	18.2	13.1	13.5	13.4	39.5	148.7	56.7	32.8	18.5	21.6	19.9	17.8	413.7
1961	15.1	14.3	12.6	8.7	55.6	149.1	46.7	27.8	45.0	41.6	32.5	26.6	475.6
1962	20.7	22.4	19.1	33.6	75.0	236.3	152.7	71.3	45.7	37.7	25.0	21.0	760.5
1963	18.4	19.9	15.0	30.4	100.0	266.0	119.5	43.7	41.1	29.6	23.9	17.9	715.4
1964	16.4	15.0	14.5	17.9	69.6	202.6	175.5	42.5	23.4	20.8	23.4	22.9	644.5
1965	20.4	18.5	16.4	25.1	58.2	245.1	205.2	78.1	48.5	39.1	25.6	21.3	801.5
1966	18.5	16.6	18.2	27.5	104.8	137.8	88.7	43.2	29.5	31.5	22.5	19.0	557.8
1967	19.6	15.2	21.0	15.8	73.2	325.2	272.3	63.6	41.2	47.7	29.5	19.3	943.6
1968	19.8	19.2	27.0	21.1	53.9	250.4	169.0	87.2	53.5	39.8	25.6	21.1	787.6
1969	19.9	18.3	18.4	25.6	97.0	172.5	160.2	50.7	25.9	26.7	23.9	18.4	657.5
1970	14.3	14.5	13.4	18.6	120.4	332.9	159.6	50.4	52.5	35.7	26.2	22.7	861.2
1971	22.9	21.6	17.9	27.7	94.7	282.1	187.5	71.0	63.8	45.0	31.8	23.0	889.0
1972	18.9	25.9	34.0	25.0	85.0	238.5	127.5	88.6	63.7	43.8	29.3	22.9	803.1
1973	17.6	16.4	18.2	39.2	113.1	207.7	131.0	47.5	54.2	33.3	24.9	21.2	724.3
1974	20.1	16.0	20.0	28.9	63.6	342.7	226.0	75.0	42.9	33.3	26.4	17.6	912.5
1975	16.1	11.8	18.4	36.3	118.2	271.6	406.0	86.7	35.4	0.0	0.0	0.0	1000.5
AVERAGE	17.8	15.7	18.2	25.4	91.0	219.2	156.9	56.8	38.4	31.6	24.2	19.8	714.9
MEDIAN	18.4	15.2	17.5	23.1	95.8	207.7	136.9	52.7	38.7	32.0	25.0	20.9	711.5
80 PERCENTILE	14.3	12.2	14.3	18.4	56.8	149.1	90.0	39.8	25.9	25.0	22.0	17.9	575.7
60 PERCENTILE	17.6	15.0	16.3	20.2	75.0	185.7	128.7	50.4	32.6	29.6	23.9	19.3	657.5
40 PERCENTILE	18.9	15.7	18.2	25.6	100.0	233.1	160.2	61.0	42.9	33.3	25.6	21.2	760.9
20 PERCENTILE	19.9	18.4	20.0	28.9	113.5	274.4	201.3	71.8	48.5	39.1	28.1	22.9	803.1
MAXIMUM	25.5	25.9	34.0	70.6	147.0	342.7	272.3	88.6	64.8	52.7	32.5	26.6	1024.4
MINIMUM	11.2	10.1	11.1	8.7	39.5	91.7	46.7	25.4	15.8	18.1	15.0	12.1	405.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 WITHOUT DEVELOPMENT LEVEL

78/02/17.

CLARKS FORK OF YELLOWSTONE AT EDGAR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	23.5	16.0	26.2	35.8	141.7	142.8	86.1	19.8	14.0	22.3	20.4	17.8	606.4
1940	13.7	17.3	19.7	26.4	143.7	186.2	40.7	3.8	17.9	34.4	26.0	26.0	555.8
1941	20.5	16.9	15.6	22.4	118.6	168.6	57.8	38.1	81.9	62.1	38.1	30.0	671.6
1942	23.4	18.2	23.2	42.2	97.5	192.8	138.1	21.4	22.5	30.7	32.2	30.3	672.5
1943	23.3	22.4	34.1	83.1	125.9	324.1	288.5	77.8	44.4	32.4	32.4	27.0	1115.4
1944	22.2	20.1	20.1	19.8	102.1	236.7	142.1	27.2	34.0	30.4	27.5	23.4	705.6
1945	23.3	18.8	22.7	20.8	73.0	241.3	221.1	63.7	34.5	35.4	33.2	27.0	814.8
1946	28.1	21.4	24.7	56.6	93.9	209.8	106.0	26.0	25.7	33.1	29.9	26.7	681.9
1947	20.1	20.2	32.8	28.6	165.3	196.1	147.4	43.0	24.2	35.3	32.1	27.6	774.7
1948	24.0	27.0	24.7	26.1	155.7	294.8	83.0	29.6	19.2	22.4	24.4	21.0	751.9
1949	17.1	16.6	27.7	36.4	160.2	236.6	89.5	17.9	26.5	33.6	29.5	29.6	721.2
1950	23.0	21.2	23.1	27.9	69.2	266.5	232.5	41.2	46.0	55.1	43.8	36.7	908.2
1951	29.0	28.6	30.7	35.9	141.9	200.8	222.0	92.2	42.0	45.6	37.1	26.1	949.8
1952	28.1	27.7	25.1	50.0	148.4	234.2	95.2	48.7	22.7	23.0	25.8	28.9	757.8
1953	28.5	19.5	20.5	25.1	50.8	245.5	135.4	37.9	19.5	18.7	27.7	27.8	656.9
1954	24.7	23.0	22.4	29.0	165.4	181.3	175.1	32.4	22.0	24.2	25.0	26.7	751.2
1955	25.7	22.7	25.0	27.5	65.9	194.9	86.2	20.9	13.0	18.4	26.5	28.6	555.3
1956	21.5	22.1	31.7	36.5	181.2	345.8	122.5	44.8	26.6	21.7	32.0	25.9	914.3
1957	21.1	27.1	25.3	24.5	152.5	347.8	170.7	37.2	37.9	36.7	36.0	30.5	947.3
1958	26.3	20.9	21.1	23.9	188.6	201.6	51.1	30.8	24.2	20.5	29.7	30.4	669.1
1959	23.9	21.3	24.5	30.1	54.1	348.2	146.2	35.6	23.8	41.4	35.3	27.9	812.3
1960	19.5	18.9	28.4	30.0	60.1	218.2	37.1	21.9	10.4	20.7	26.6	23.9	515.7
1961	22.5	19.0	18.5	7.0	85.2	240.1	36.1	10.9	55.5	49.9	34.8	26.3	605.8
1962	19.6	22.3	22.0	52.8	106.6	288.8	126.7	53.4	35.7	33.3	29.8	29.7	820.7
1963	20.8	32.6	22.5	25.4	139.0	286.9	97.6	17.1	36.6	24.7	28.3	23.8	755.3
1964	18.6	18.0	19.4	29.6	117.1	262.0	189.0	27.5	17.7	21.8	30.9	28.3	779.9
1965	27.3	23.5	19.6	35.0	93.5	340.9	209.3	74.5	48.7	45.3	33.9	30.2	981.7
1966	24.0	18.8	23.0	24.5	113.0	169.0	67.3	22.7	25.0	26.4	28.7	26.4	570.8
1967	26.1	21.2	21.6	20.8	110.9	378.2	241.7	49.0	28.6	42.4	36.0	28.1	1004.6
1968	25.8	23.9	25.7	21.6	45.2	281.1	130.1	80.9	46.7	37.7	30.9	25.4	775.0
1969	24.1	21.8	22.0	40.1	138.7	194.9	100.6	19.7	16.8	30.1	29.9	27.2	666.1
1970	23.7	22.5	21.5	20.6	137.6	307.8	125.6	25.1	39.2	37.9	30.6	27.5	819.4
1971	23.7	24.9	24.8	24.2	126.7	361.1	188.1	62.5	56.9	51.0	37.3	30.4	1016.6
1972	28.9	28.4	35.7	28.0	112.6	340.0	144.1	75.6	56.0	58.2	40.0	28.8	1017.3
1973	27.8	25.5	24.3	33.3	101.8	148.7	93.7	29.0	52.2	36.3	36.3	24.7	673.6
1974	30.2	21.9	24.7	36.8	98.7	395.5	189.9	41.8	36.6	29.9	33.3	27.1	988.4
1975	17.9	19.4	31.7	30.4	100.2	255.2	344.2	69.1	31.5	0.0	0.0	0.0	899.6
AVERAGE	23.6	21.9	24.5	31.8	116.9	259.6	139.4	40.8	32.9	33.1	30.6	26.6	780.7
MEDIAN	23.7	21.4	23.2	28.6	113.0	260.1	126.7	32.4	26.6	33.1	30.9	27.2	755.3
80 PERCENTILE	20.5	18.8	20.5	22.4	73.0	192.8	83.0	20.9	19.2	22.3	26.6	25.4	656.9
60 PERCENTILE	23.3	20.9	22.5	26.4	102.1	218.2	100.8	27.5	24.2	30.1	29.8	26.7	705.6
40 PERCENTILE	24.0	22.3	24.7	30.0	126.7	268.5	142.1	38.1	35.7	35.3	32.2	27.9	774.9
20 PERCENTILE	27.5	24.9	29.2	38.5	155.7	340.9	189.0	61.8	46.0	42.4	36.0	29.7	987.3
MAXIMUM	30.2	32.6	36.7	83.1	188.6	395.5	288.5	92.2	81.9	62.1	43.8	36.7	1115.4
MINIMUM	13.7	16.0	15.6	7.0	45.2	142.8	36.1	3.8	10.4	18.4	20.4	17.8	515.7

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 WITHOUT DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER AT BILLINGS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	134.7	102.7	212.8	255.9	895.3	952.1	451.1	177.1	129.5	170.9	150.7	132.0	3724.8
1940	85.3	104.8	136.0	170.6	713.5	1117.1	318.9	96.6	119.4	207.4	160.9	134.1	3364.6
1941	116.7	112.2	129.3	160.0	561.0	910.8	352.5	219.2	396.5	422.1	284.5	220.2	3885.0
1942	180.6	150.1	242.4	350.6	798.8	1442.7	874.3	242.3	207.5	252.3	228.0	205.8	5195.4
1943	160.6	222.9	329.9	522.6	794.1	2196.9	1616.2	484.3	316.4	249.5	228.2	191.1	7317.7
1944	162.8	139.7	177.9	147.3	521.1	1707.7	1012.1	261.1	250.6	233.1	208.3	142.8	4964.5
1945	159.4	126.5	165.5	158.8	463.9	1495.4	1214.0	399.4	241.0	243.0	240.2	148.5	5105.6
1946	198.9	187.3	196.7	330.4	640.3	1236.4	607.3	205.5	216.1	271.7	214.6	179.9	4485.1
1947	141.6	127.2	194.2	273.9	1047.0	1490.5	991.0	384.0	274.9	300.0	240.5	204.8	5689.6
1948	164.0	155.9	199.0	233.9	1040.1	2142.7	745.5	317.8	180.6	208.6	189.8	134.4	5712.5
1949	119.9	132.5	181.6	290.0	949.4	1329.7	554.0	203.2	210.1	244.7	206.3	124.0	4545.4
1950	98.6	116.4	193.5	287.5	594.4	1639.9	1302.2	462.8	295.0	332.0	293.0	249.4	5714.7
1951	173.5	196.1	231.2	271.2	901.7	1231.2	1085.2	576.4	308.9	317.2	268.3	184.2	5747.2
1952	163.5	157.7	186.6	408.7	1238.8	1612.2	720.3	356.1	212.2	192.3	179.4	166.4	5594.2
1953	172.2	140.4	189.3	166.0	334.3	1465.1	821.4	305.6	180.6	173.5	190.5	173.1	4272.0
1954	122.2	149.9	139.0	198.6	851.2	1050.2	932.8	301.8	183.0	189.6	187.9	159.3	4495.5
1955	134.6	114.2	142.7	236.2	458.7	1193.8	600.7	231.3	151.7	197.2	170.1	172.2	3793.4
1956	160.4	145.1	249.9	309.7	1216.0	1913.2	727.6	324.6	212.3	190.4	211.1	176.9	5837.7
1957	180.9	142.7	185.4	187.2	968.4	2244.5	1047.3	311.2	276.2	243.6	235.9	193.5	6177.8
1958	152.8	134.5	158.5	180.4	961.3	1140.2	451.1	219.1	167.5	189.4	198.3	176.7	4109.8
1959	141.0	124.6	178.3	215.5	506.6	1951.3	879.9	245.2	196.4	249.5	231.5	193.4	5193.2
1960	118.5	138.9	177.9	209.3	406.0	1173.7	538.3	194.6	132.5	145.0	142.0	151.1	3387.8
1961	135.8	132.9	124.5	85.1	427.8	1116.9	279.8	122.2	277.1	309.1	273.2	195.4	3479.8
1962	145.6	221.3	214.2	358.9	810.5	1731.0	905.5	405.8	295.0	288.3	216.6	186.6	5739.3
1963	153.1	228.3	162.9	182.8	783.0	1792.8	675.6	291.9	239.3	280.4	200.8	153.5	4984.4
1964	145.8	152.1	148.9	202.0	708.3	1718.6	1144.6	343.8	221.8	189.7	204.9	186.2	5366.7
1965	209.9	185.2	173.2	305.9	690.0	2087.7	1459.5	565.9	402.6	356.1	255.5	200.2	6891.7
1966	181.3	171.4	203.0	236.5	814.9	969.7	647.1	209.9	195.3	213.3	216.4	192.3	4071.1
1967	190.2	164.1	196.2	185.9	683.0	2445.8	1600.2	480.4	241.8	300.6	250.2	196.2	6854.6
1968	144.9	222.3	227.0	220.2	475.2	2033.0	1133.2	547.0	437.9	341.2	275.3	201.3	6288.5
1969	178.9	180.0	225.5	342.7	973.6	1326.0	942.7	282.7	197.5	252.6	225.6	189.6	5337.6
1970	156.5	159.8	167.3	183.3	1014.9	2175.0	1021.4	329.1	342.6	302.7	239.3	190.8	6282.7
1971	189.9	227.0	195.9	244.0	899.4	2217.0	1298.4	457.7	391.0	349.4	270.7	201.8	6942.2
1972	142.8	198.9	301.3	235.1	718.8	1958.4	872.9	477.5	393.2	391.2	285.8	201.4	6197.3
1973	192.6	171.5	201.7	290.9	858.6	1296.5	643.5	248.8	323.1	265.4	244.1	199.9	4896.6
1974	191.2	147.5	178.6	275.9	617.2	2438.2	1322.0	491.5	299.2	257.7	245.9	182.1	6647.0
1975	150.4	123.6	213.9	307.1	912.4	1955.6	2282.6	593.9	295.6	0.0	0.0	0.0	6795.1
AVERAGE	158.1	157.0	191.7	248.7	760.8	1618.9	911.2	331.1	254.6	249.5	219.0	176.0	5272.7
MEDIAN	160.6	149.9	186.4	233.9	783.0	1490.5	874.3	305.6	239.3	249.5	225.6	186.2	5195.4
80 PERCENTILE	132.2	126.5	149.3	180.4	506.6	1140.2	467.1	209.9	180.6	189.7	189.8	153.5	4071.1
60 PERCENTILE	145.6	140.4	177.9	207.5	690.0	1329.7	727.6	262.3	212.2	252.3	211.1	176.9	4964.5
40 PERCENTILE	162.8	157.7	195.9	253.9	814.9	1718.6	982.7	329.1	274.9	243.6	235.9	191.1	5849.6
20 PERCENTILE	180.6	187.3	214.2	305.9	961.3	2087.7	1144.6	457.7	316.4	309.1	255.5	200.2	6197.3
MAXIMUM	209.9	228.3	329.9	522.6	1238.8	2445.8	1616.2	576.4	437.9	432.1	293.0	249.4	7317.7
MINIMUM	85.3	102.7	124.5	85.1	334.3	910.8	279.8	96.6	119.4	165.0	140.7	124.0	3364.6

1975 DEVELOPMENT LEVEL

INFLOW BOYSEN RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	37.8	29.6	56.0	91.5	91.6	80.2	0.0	12.1	42.6	43.4	33.0	29.4	587.3
1940	28.7	26.9	35.6	25.2	48.4	28.9	1.4	12.7	71.8	40.3	29.7	37.4	407.0
1941	35.7	27.1	43.8	43.1	184.4	272.4	55.8	114.6	71.8	124.8	65.5	51.4	1040.4
1942	44.2	41.7	58.6	87.3	188.2	252.9	136.4	23.6	41.5	61.3	56.7	45.3	1037.7
1943	50.7	49.6	70.0	191.7	193.9	372.3	311.4	46.6	56.4	41.6	53.7	42.9	1480.8
1944	33.9	37.5	45.6	69.9	227.2	475.4	200.2	18.7	26.1	62.6	44.0	37.9	1279.0
1945	42.9	37.5	55.2	98.8	190.7	284.2	256.3	74.9	76.4	95.6	48.8	39.9	1201.2
1946	45.0	43.9	57.4	73.6	90.6	223.7	93.5	20.8	62.4	91.6	54.3	43.0	900.0
1947	35.8	39.8	57.2	60.5	292.2	487.7	342.1	116.2	58.7	48.2	46.5	47.3	1688.2
1948	50.2	57.4	72.4	68.9	191.9	313.4	95.6	29.4	58.6	58.7	45.1	40.3	1074.1
1949	36.4	39.9	63.6	68.1	192.4	281.6	106.8	30.1	60.4	93.4	69.3	43.4	1085.4
1950	40.9	45.2	53.4	95.3	107.2	377.3	240.1	67.2	96.9	107.8	72.1	91.5	1394.9
1951	45.8	53.0	62.2	65.6	228.8	370.8	276.9	130.7	64.7	128.2	58.1	41.7	1526.5
1952	45.8	42.6	45.2	104.3	229.5	302.7	103.1	67.2	43.9	98.5	42.6	44.9	1120.1
1953	49.5	39.4	41.2	45.5	42.8	282.2	68.5	52.6	52.4	56.5	56.0	44.9	831.5
1954	49.4	45.3	46.9	40.6	201.3	138.1	147.0	49.3	40.4	57.3	45.0	35.4	896.0
1955	36.6	26.6	30.4	42.9	70.9	150.6	58.6	32.9	28.1	54.7	40.7	54.2	627.2
1956	47.6	33.0	59.8	54.3	225.9	410.7	133.3	41.2	40.6	53.2	46.9	39.6	1296.1
1957	34.6	34.0	42.0	53.7	189.0	520.2	331.9	89.2	69.7	111.2	65.7	55.4	1595.7
1958	46.9	50.1	51.3	49.8	382.6	145.3	37.2	53.1	34.3	50.2	46.8	44.0	910.8
1959	36.9	39.1	61.7	45.1	91.2	225.9	90.9	45.1	31.2	48.1	48.4	39.5	743.1
1960	34.2	27.4	51.6	50.9	31.8	71.5	11.7	18.5	26.3	63.7	48.5	33.8	469.9
1961	26.7	29.3	31.4	20.4	83.9	207.6	24.7	28.9	42.7	71.8	53.1	35.4	655.9
1962	39.0	93.3	42.6	87.8	135.4	371.5	143.3	95.5	91.6	44.4	46.3	37.8	1148.5
1963	28.9	40.4	45.1	44.9	91.9	436.5	118.3	95.3	81.7	42.5	45.0	35.8	1006.3
1964	35.8	31.4	38.9	54.2	119.2	325.4	212.5	38.5	38.7	57.1	36.8	35.3	1015.8
1965	43.7	37.8	40.6	80.3	105.2	529.9	390.5	122.8	79.8	103.6	68.5	32.1	1654.8
1966	29.8	37.6	55.9	49.5	78.3	74.6	40.7	44.5	95.5	70.5	46.9	39.4	693.2
1967	36.7	38.2	53.4	41.8	144.1	611.4	435.4	68.0	44.8	86.5	64.8	49.9	1715.0
1968	35.0	47.0	73.9	52.7	81.8	369.1	100.8	99.9	65.1	88.8	83.6	90.3	1128.0
1969	44.2	37.7	57.2	67.9	154.0	289.9	105.5	50.3	48.5	45.2	48.8	39.5	1008.7
1970	33.8	34.4	34.4	41.0	128.1	260.4	93.1	38.5	40.8	51.6	49.8	34.2	840.1
1971	34.4	44.6	36.3	49.6	186.9	642.3	234.2	80.0	85.9	98.8	63.8	54.3	1647.5
1972	50.1	75.5	76.2	97.3	193.1	440.6	147.2	93.2	64.7	78.9	56.2	40.4	1393.4
1973	38.0	52.4	52.2	117.0	255.2	177.9	145.3	47.2	188.2	102.8	77.0	49.1	1302.3
1974	38.4	39.8	70.5	93.1	143.0	423.3	170.3	75.5	62.1	47.2	50.0	34.7	1277.9
1975	34.9	31.2	45.3	43.4	119.2	281.8	413.6	91.8	40.5	0.0	0.0	0.0	1191.7
AVERAGE	39.4	42.1	52.0	61.0	150.1	309.7	149.3	59.9	58.0	73.4	52.1	41.4	1098.4
MEDIAN	37.8	39.1	52.2	54.3	151.9	249.9	118.3	53.1	56.7	69.2	49.8	40.3	1085.4
80 PERCENTILE	34.2	31.4	40.6	44.9	81.8	150.6	50.9	28.9	38.3	56.5	45.0	35.4	743.1
60 PERCENTILE	36.4	37.6	45.6	51.5	119.2	260.4	100.8	45.1	43.9	42.5	48.4	39.5	1015.8
40 PERCENTILE	40.9	39.9	55.9	60.5	184.4	389.1	147.9	67.2	62.1	71.8	56.3	43.4	1148.5
20 PERCENTILE	45.8	47.0	61.7	73.6	201.3	476.5	296.3	96.6	71.8	95.6	65.5	49.9	1393.4
MAXIMUM	50.7	93.3	76.2	191.7	392.6	642.3	435.4	130.7	188.2	128.2	83.6	95.4	1715.0
MINIMUM	26.7	26.6	30.4	20.4	31.8	28.9	0.0	12.1	26.1	43.4	29.7	29.4	407.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 DEVELOPMENT LEVEL

78/02/16.

WIND RIVER AT BOYSEN

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	57.8	57.8	5.3	4.8	3.4	1.3	0.0	72.0	72.0	58.8	57.7	56.7	448.0
1940	55.3	55.3	0.0	0.0	0.0	0.0	0.0	72.0	72.0	43.2	42.2	41.2	381.2
1941	39.9	39.9	46.4	65.9	65.0	62.7	55.1	114.6	72.0	120.4	119.2	118.0	939.0
1942	116.5	116.5	84.7	84.3	83.5	81.4	74.3	72.0	72.0	83.0	81.8	80.8	1030.8
1943	79.4	79.4	135.0	172.0	171.1	169.2	162.9	86.6	72.0	93.3	92.1	90.9	1403.8
1944	89.5	89.5	135.0	151.2	150.4	148.7	142.2	72.0	72.0	71.3	70.2	69.1	1261.0
1945	67.7	67.7	106.0	105.6	104.7	102.8	96.6	74.9	76.4	106.5	105.3	104.1	1118.3
1946	102.6	102.6	51.1	50.6	49.7	47.5	40.4	72.0	72.0	90.2	89.0	87.9	855.6
1947	86.4	86.4	135.0	207.9	207.1	205.4	199.2	116.2	72.0	107.9	106.7	105.5	1635.7
1948	104.1	104.1	86.1	85.7	84.8	82.7	75.5	72.0	72.0	78.3	77.2	76.1	998.5
1949	74.6	74.6	90.6	90.1	89.2	87.1	79.9	72.0	72.0	97.5	96.3	95.2	1019.2
1950	93.8	93.8	120.0	119.6	118.7	117.0	111.1	72.0	96.9	117.3	116.1	114.9	1291.1
1951	113.4	113.4	135.0	145.6	144.8	143.1	136.8	130.7	72.0	115.8	114.5	113.4	1478.5
1952	111.9	111.9	98.1	97.7	96.9	94.8	87.5	72.0	72.0	89.1	88.0	86.8	1106.7
1953	85.4	85.4	85.8	85.4	84.5	82.4	75.4	72.0	72.0	86.0	84.9	83.8	783.2
1954	82.4	82.4	82.4	81.9	81.0	78.8	71.7	72.0	72.0	79.2	78.0	76.9	836.8
1955	75.5	75.5	15.9	15.5	14.5	12.3	5.0	72.0	72.0	77.7	76.6	75.5	588.0
1956	74.2	74.2	123.6	123.2	122.3	120.5	113.5	72.0	72.0	82.1	80.9	79.8	1138.2
1957	78.4	78.4	135.0	142.5	141.7	140.2	134.4	89.2	72.0	118.4	117.1	116.0	1523.2
1958	114.5	114.5	59.2	58.8	57.9	56.1	37.2	72.0	72.0	79.4	78.2	77.1	886.9
1959	75.7	75.7	34.6	34.2	33.2	31.0	23.7	72.0	72.0	79.7	78.6	77.5	688.1
1960	76.1	76.1	0.0	0.0	0.0	0.0	0.0	72.0	72.0	49.7	48.7	47.7	442.2
1961	46.3	46.3	25.2	24.8	23.8	21.6	14.1	72.0	72.0	80.9	79.7	78.6	585.2
1962	77.2	77.2	118.3	117.9	117.0	115.0	108.2	72.0	72.0	84.2	83.0	81.9	1124.1
1963	80.5	80.5	94.3	93.9	93.1	91.2	84.6	72.0	81.7	89.7	88.5	87.3	1037.3
1964	85.9	85.9	94.2	93.7	92.9	91.1	84.8	72.0	72.0	73.8	72.6	71.5	990.4
1965	70.2	70.2	135.0	188.1	187.3	185.8	180.4	122.8	79.8	112.7	111.5	110.3	1554.2
1966	108.8	108.8	.6	.1	0.0	0.0	0.0	72.0	72.0	82.9	81.7	80.6	607.5
1967	79.2	79.2	135.0	225.9	14.4	328.9	322.2	72.0	72.0	105.4	104.2	103.0	1641.2
1968	101.5	101.5	75.8	75.3	74.4	72.4	65.6	99.9	72.0	114.0	112.8	111.7	1077.0
1969	110.2	110.2	75.4	75.0	74.1	72.1	65.0	72.0	72.0	84.6	83.5	82.3	976.4
1970	80.9	80.9	57.1	56.7	55.8	53.7	46.7	72.0	72.0	75.5	74.3	73.2	798.8
1971	71.8	71.8	135.0	200.1	199.3	197.6	191.3	80.0	85.9	114.9	113.6	112.5	1573.8
1972	111.0	111.0	134.8	134.4	133.5	131.7	124.9	93.2	72.0	100.6	99.3	98.2	1344.7
1973	96.7	96.7	91.7	91.3	90.4	88.2	80.8	72.0	188.2	114.7	113.4	112.3	1236.3
1974	110.8	110.8	122.9	122.5	121.6	119.8	113.2	75.5	72.0	93.3	92.1	90.9	1245.3
1975	89.5	89.5	126.0	125.6	124.8	123.2	117.9	91.8	72.0	46.5	45.3	44.2	1096.2
AVERAGE	85.8	85.8	85.0	95.3	88.8	95.9	89.2	80.4	76.8	89.1	88.0	86.8	1047.1
MEDIAN	80.9	80.9	90.6	90.1	84.8	87.1	79.9	72.0	72.0	86.0	84.9	83.8	1030.8
80 PERCENTILE	71.8	71.8	34.6	34.2	23.8	31.0	23.7	72.0	72.0	77.7	76.6	75.5	688.1
60 PERCENTILE	78.4	78.4	75.4	75.0	65.0	72.1	45.0	72.0	72.0	82.9	81.7	80.6	976.4
40 PERCENTILE	86.4	86.4	98.1	97.7	93.1	94.8	87.5	72.0	72.0	93.3	92.1	90.9	1118.3
20 PERCENTILE	108.8	108.8	135.0	145.6	133.5	143.1	136.8	86.6	72.0	112.7	111.5	110.3	1344.7
MAXIMUM	116.5	116.5	135.0	225.9	207.1	328.9	322.2	130.7	188.2	120.4	119.2	118.0	1641.2
MINIMUM	39.9	39.9	0.0	0.0	0.0	0.0	0.0	72.0	72.0	43.2	42.2	41.2	381.2

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 DEVELOPMENT LEVEL

78/02/16.

GREYBULL RIVER AT BASIN

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	6.1	5.0	11.5	5.7	2.0	2.2	0.0	0.0	0.0	.2	.7	5.6	39.0
1940	3.9	4.4	5.4	2.9	14.7	4.6	1.2	0.0	1.1	3.9	6.5	7.1	55.7
1941	4.5	3.9	5.9	11.1	17.4	61.0	15.9	55.6	40.3	30.4	17.6	8.7	272.3
1942	4.6	6.4	10.2	17.6	43.6	58.7	12.3	2.2	3.8	6.3	8.1	6.0	179.8
1943	6.3	7.0	15.3	26.8	17.1	57.8	42.3	6.2	3.3	4.1	9.2	8.0	203.4
1944	6.3	6.3	7.8	13.3	45.3	81.7	29.7	2.3	1.0	4.3	7.6	6.2	211.8
1945	6.5	6.1	11.4	8.8	6.3	68.0	48.1	11.9	9.1	7.9	10.0	9.1	203.2
1946	8.2	7.0	10.9	12.7	3.2	16.6	6.5	2.1	13.5	14.4	11.1	6.9	113.1
1947	3.7	5.1	8.1	13.6	22.1	46.1	45.0	6.4	3.8	7.0	11.3	7.3	179.5
1948	6.2	6.0	12.4	18.9	14.0	41.3	15.2	3.2	3.6	5.8	8.3	7.2	142.1
1949	6.0	4.9	12.2	11.0	3.8	30.5	4.8	1.0	.8	4.8	7.8	4.7	92.3
1950	4.3	6.2	7.0	6.3	3.2	5.7	5.9	5.5	6.9	9.3	10.0	9.1	79.4
1951	5.8	5.2	6.7	7.5	5.2	31.1	46.6	12.4	4.4	11.2	9.0	6.4	151.5
1952	5.7	6.0	8.7	34.2	46.1	59.7	10.3	5.9	1.1	1.7	6.5	6.2	192.1
1953	7.1	5.4	7.8	4.8	2.1	25.5	.7	.8	.4	3.1	5.1	6.3	69.1
1954	5.1	5.4	5.5	7.6	2.7	4.4	1.7	0.0	.3	1.3	1.5	4.7	40.2
1955	4.2	4.4	5.1	6.4	.1	1.2	.2	0.0	.2	.6	4.4	6.3	33.1
1956	4.6	4.3	7.3	1.8	2.0	7.2	1.3	1.0	1.2	2.2	5.6	5.5	44.0
1957	5.0	5.1	6.0	3.9	29.9	172.0	57.5	3.3	3.6	4.9	10.3	8.6	310.3
1958	6.1	5.3	5.6	9.1	39.6	24.8	9.7	3.1	1.5	1.7	6.7	6.7	119.9
1959	5.6	5.4	7.4	6.8	3.4	5.3	2.0	.4	.5	4.3	5.5	5.5	52.1
1960	5.1	3.9	7.9	3.5	0.0	.2	0.0	0.0	.4	1.1	4.0	3.3	29.4
1961	3.1	3.8	7.1	.2	0.0	9.7	1.4	.4	9.0	6.9	9.4	5.4	56.4
1962	5.0	13.6	11.2	18.1	4.3	47.0	12.8	6.2	2.7	1.5	6.1	7.1	135.6
1963	3.1	6.5	11.4	5.4	7.9	154.1	7.6	.8	4.1	2.2	7.2	5.8	218.1
1964	6.4	5.4	7.0	7.9	13.7	44.8	46.9	1.9	1.3	1.2	3.4	2.7	162.6
1965	3.0	2.5	4.6	12.2	9.4	103.0	65.0	9.8	13.8	11.4	9.8	8.5	253.0
1966	7.1	5.4	6.3	2.6	0.0	.8	.8	.7	1.9	1.9	7.3	5.6	40.0
1967	4.2	4.1	7.3	2.8	5.5	116.4	58.7	3.1	3.2	3.1	8.6	5.8	222.8
1968	5.3	8.2	7.7	4.7	1.6	24.3	1.9	9.6	4.5	3.9	5.9	6.2	83.8
1969	6.3	5.6	7.0	10.9	3.0	25.6	10.1	1.0	2.2	4.2	7.6	6.3	90.0
1970	3.8	4.9	6.6	4.8	8.6	29.3	5.2	.7	2.3	3.3	7.3	6.4	83.2
1971	5.4	5.5	6.3	6.2	9.6	77.1	7.0	2.4	2.6	12.4	9.0	3.2	146.7
1972	4.3	7.5	11.5	6.5	3.2	39.7	2.0	4.5	1.7	5.0	8.4	6.1	100.4
1973	4.8	5.7	12.8	8.3	27.8	12.0	7.6	2.1	18.8	0.0	0.0	0.0	99.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGE	4.9	5.4	7.9	8.8	11.3	40.8	15.8	4.5	4.6	5.1	6.9	5.8	121.8
MEDIAN	5.1	5.4	7.3	6.8	5.2	29.3	7.0	2.1	2.3	3.9	7.3	6.2	100.4
80 PERCENTILE	3.9	4.3	5.9	3.5	2.0	4.6	1.2	.4	.5	1.3	4.4	4.7	44.0
60 PERCENTILE	4.6	5.1	7.0	6.2	3.2	24.3	4.8	1.0	1.5	3.1	6.5	5.8	83.8
40 PERCENTILE	5.6	5.5	7.8	8.3	8.6	41.3	10.1	3.1	3.3	4.3	8.1	6.3	142.1
20 PERCENTILE	6.3	6.3	11.4	12.7	17.4	64.8	42.3	6.2	4.5	7.0	9.4	7.2	205.2
MAXIMUM	8.2	13.6	15.3	34.2	46.1	172.0	65.0	55.6	40.3	30.4	17.6	9.1	310.3
MINIMUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 DEVELOPMENT LEVEL

78/02/16.

INFLOW BUFFALO BILL RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	16.3	10.9	27.6	53.4	186.9	231.9	162.8	48.3	21.4	27.4	31.2	19.8	837.9
1940	14.4	15.3	19.1	34.1	169.1	239.9	72.7	25.6	25.7	32.2	26.9	25.7	700.7
1941	18.1	16.4	17.9	29.0	161.2	254.3	119.8	112.5	92.6	63.5	35.5	27.3	948.1
1942	17.6	13.0	16.7	55.2	130.8	283.6	211.3	33.4	17.8	15.0	19.1	17.8	831.3
1943	14.4	17.4	27.7	145.2	173.9	416.4	382.8	95.9	34.1	22.3	26.9	18.8	1375.8
1944	15.5	12.9	13.4	22.8	135.4	267.8	182.4	30.8	18.8	17.8	14.5	16.7	748.8
1945	13.9	10.3	14.3	20.7	109.2	261.2	283.1	71.9	34.5	32.7	26.2	21.2	899.1
1946	15.7	14.6	22.3	84.2	119.2	278.3	142.9	33.8	28.0	24.7	20.7	17.8	802.2
1947	14.8	13.0	15.2	35.4	210.4	272.5	268.3	82.2	29.5	35.0	25.2	20.2	1021.7
1948	19.8	16.3	15.7	32.2	200.9	375.9	128.2	26.7	15.6	14.0	13.3	10.4	869.0
1949	5.9	10.7	8.5	66.2	185.8	332.2	124.1	19.5	17.1	23.8	24.0	13.2	821.0
1950	12.8	9.1	17.1	37.7	100.3	340.7	292.3	51.7	56.8	60.2	37.7	30.0	1046.4
1951	18.7	20.2	18.1	53.0	227.5	305.5	343.5	118.8	43.2	35.0	26.9	21.5	1231.9
1952	13.4	13.6	14.0	86.4	198.6	316.3	139.1	43.9	22.6	15.8	14.4	15.9	894.0
1953	15.2	13.2	18.7	36.6	78.1	323.7	187.3	37.4	21.9	16.4	19.1	15.1	782.7
1954	15.7	13.8	12.5	43.1	229.0	232.7	210.2	31.0	18.0	13.1	13.4	13.5	846.0
1955	9.2	9.4	11.1	21.4	100.1	248.7	126.0	31.1	15.0	15.4	18.3	21.1	626.8
1956	16.8	12.2	26.8	61.0	275.4	446.4	176.5	44.9	22.2	18.2	20.3	17.7	1138.4
1957	13.5	11.9	15.0	27.9	221.9	427.7	235.5	53.2	40.8	27.0	20.9	21.0	1116.3
1958	18.1	13.4	14.2	25.2	285.6	237.8	82.2	32.5	18.9	13.6	24.6	18.3	784.4
1959	17.3	13.5	16.1	35.0	86.2	408.4	152.6	37.0	22.4	31.8	24.0	18.8	863.1
1960	16.2	14.2	22.8	34.4	90.7	245.3	77.1	26.5	18.8	17.4	15.0	12.9	591.3
1961	10.6	9.9	13.1	14.0	139.1	299.6	66.7	19.7	54.1	51.9	34.9	19.7	733.3
1962	18.8	20.3	19.4	91.3	133.2	362.6	200.2	64.7	26.8	20.9	19.8	17.9	995.9
1963	15.9	20.5	17.0	30.2	192.2	407.6	166.5	31.7	30.8	15.7	21.7	20.2	970.0
1964	18.7	17.0	16.5	27.6	153.5	307.5	296.7	42.7	15.5	18.0	21.5	25.9	961.1
1965	21.4	16.7	19.7	60.8	157.3	462.3	349.9	93.4	54.1	44.6	30.9	25.3	1336.4
1966	21.8	18.0	24.8	35.7	161.9	206.1	105.6	34.3	33.2	21.7	25.1	20.2	708.4
1967	18.3	14.3	19.4	22.2	156.3	460.7	311.6	54.2	22.1	25.5	28.9	21.4	1154.9
1968	20.9	19.0	21.9	19.5	72.5	336.1	182.5	83.8	86.6	27.0	23.4	22.8	876.0
1969	21.5	18.2	21.2	64.3	206.5	223.8	134.8	34.1	23.2	22.8	26.2	19.7	816.3
1970	18.6	16.9	17.9	18.7	207.3	427.9	207.1	47.8	35.3	27.7	25.4	20.5	1071.1
1971	20.6	17.3	17.6	39.0	190.2	495.9	301.3	86.1	39.3	36.3	29.8	19.5	1292.9
1972	18.2	18.7	22.5	27.7	148.2	153.6	113.9	35.7	39.2	39.5	32.1	22.7	672.0
1973	22.1	18.5	35.8	32.1	141.4	418.1	169.2	79.1	53.8	22.0	31.8	23.4	1047.3
1974	20.4	17.1	21.2	63.8	172.1	552.2	259.0	60.0	25.1	22.4	27.0	20.5	1260.8
1975	20.0	16.3	19.8	23.3	95.4	270.7	426.1	71.0	30.7	0.0	0.0	0.0	973.3
AVERAGE	16.8	15.0	18.7	43.5	162.3	327.6	199.8	52.1	31.5	26.2	23.7	19.3	936.4
MEDIAN	16.8	14.3	17.9	35.0	161.2	307.5	176.5	42.7	25.7	22.8	24.6	19.8	876.0
80 PERCENTILE	13.9	11.9	14.2	22.8	109.2	239.9	119.8	31.0	18.8	15.8	19.1	16.7	748.8
60 PERCENTILE	15.7	13.5	16.7	32.1	148.2	278.3	152.6	34.3	22.4	21.7	21.7	18.8	837.9
40 PERCENTILE	18.1	16.4	19.1	37.7	173.9	336.1	200.2	48.3	30.8	27.0	26.2	20.5	961.1
20 PERCENTILE	19.3	18.0	22.3	61.0	206.5	418.1	283.1	79.1	40.8	35.0	29.8	22.7	1116.3
MAXIMUM	22.1	20.5	35.8	145.2	285.6	552.2	382.8	118.8	92.6	63.5	37.7	30.0	1375.8
MINIMUM	5.9	9.1	8.5	14.0	72.5	153.6	66.7	19.5	15.0	13.1	13.3	10.4	591.3

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 DEVELOPMENT LEVEL

78/07/16.

SHOSHONE RIVER AT BYRON

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	74.3	48.5	35.3	18.2	21.2	31.6	70.0	38.1	33.6	31.0	64.8	67.6	534.2
1940	36.0	52.9	26.8	18.2	6.6	17.1	39.3	38.1	33.6	21.9	64.8	67.6	423.0
1941	23.0	22.0	23.0	8.1	7.5	18.0	39.3	38.1	33.6	74.5	99.6	100.5	487.1
1942	98.5	50.6	24.4	18.2	19.9	30.4	118.6	38.1	33.6	21.9	64.8	67.6	586.6
1943	22.4	32.9	35.4	18.2	152.8	163.1	290.1	38.1	33.6	43.7	68.8	69.7	968.8
1944	67.7	50.5	23.0	9.8	1.3	11.9	89.7	38.1	33.6	21.9	64.8	67.6	480.0
1945	21.8	22.0	23.0	7.9	0.0	0.0	190.4	38.1	33.6	40.9	66.0	67.6	511.4
1946	64.3	52.2	30.0	18.2	25.9	36.3	50.2	38.1	33.6	25.3	64.8	67.6	506.6
1947	22.8	46.9	23.0	18.2	44.2	54.7	175.5	38.1	33.6	43.3	68.8	69.4	638.1
1948	67.4	53.9	23.4	18.2	89.6	100.1	39.3	38.1	33.6	21.9	64.8	67.6	618.0
1949	23.0	22.0	23.0	16.8	53.7	64.3	39.3	38.1	33.6	21.9	64.8	67.6	468.1
1950	23.0	22.0	23.0	15.7	20.2	30.9	199.7	38.1	33.6	54.1	79.3	80.2	619.8
1951	78.2	57.8	25.8	18.2	78.1	88.5	250.7	38.1	33.6	55.0	80.1	81.0	885.1
1952	79.0	51.2	23.0	18.2	85.1	95.5	46.3	38.1	33.6	22.3	64.8	67.6	624.7
1953	23.2	37.6	26.4	18.2	4.3	14.9	94.7	38.1	33.6	21.9	64.8	67.6	445.3
1954	23.7	36.0	23.0	18.2	36.1	46.5	117.4	38.1	33.6	21.9	64.8	67.6	526.9
1955	23.0	22.0	23.0	4.4	0.0	0.0	39.3	38.1	33.6	21.9	64.8	67.6	337.7
1956	24.8	22.0	32.2	18.2	176.5	187.0	83.8	38.1	33.6	24.6	64.8	67.6	773.1
1957	21.5	44.8	23.0	16.5	124.5	135.1	142.9	38.1	33.6	35.6	64.8	67.6	748.0
1958	49.7	51.0	23.0	13.0	61.4	71.9	39.3	38.1	33.6	21.9	64.8	67.6	535.4
1959	23.0	22.0	23.0	4.4	39.7	50.4	60.1	38.1	33.6	27.9	64.8	67.6	454.7
1960	26.8	43.7	38.7	18.2	0.0	0.0	39.3	38.1	33.6	21.9	64.8	67.6	392.7
1961	23.0	22.0	23.0	4.4	0.0	0.0	39.3	38.1	33.6	24.1	64.8	67.6	339.9
1962	26.8	46.5	27.1	18.2	78.6	89.1	107.5	38.1	33.6	31.9	64.8	67.6	629.7
1963	38.5	58.1	24.7	18.2	100.1	110.7	73.9	38.1	33.6	25.1	64.8	67.6	653.4
1964	26.7	46.2	24.2	16.5	30.2	40.8	204.0	38.1	33.6	26.6	64.8	67.6	619.5
1965	29.4	47.9	27.4	18.2	125.3	135.9	257.3	38.1	33.6	57.8	82.9	85.9	937.7
1966	81.9	51.5	36.7	18.2	0.0	0.0	39.3	38.1	33.6	22.0	64.8	67.6	493.7
1967	26.3	34.8	27.1	11.1	108.2	118.9	219.1	38.1	33.6	33.6	64.8	67.6	783.3
1968	43.8	56.0	30.3	8.4	4.0	14.7	89.9	38.1	33.6	46.6	71.7	72.6	509.8
1969	70.6	55.8	28.9	18.2	32.4	42.7	42.0	38.1	33.6	26.5	64.8	67.6	521.3
1970	26.6	50.6	25.6	7.6	117.3	128.0	114.5	38.1	33.6	34.7	64.8	67.6	709.0
1971	47.0	54.9	25.3	18.2	147.6	158.3	208.8	38.1	33.6	47.6	72.7	73.7	925.9
1972	71.7	36.3	37.3	18.2	0.0	0.0	39.3	38.1	33.6	33.7	64.8	67.6	440.6
1973	44.1	56.1	43.5	18.2	80.9	91.5	76.6	38.1	33.6	47.9	73.1	74.0	677.7
1974	72.0	54.7	28.9	18.2	179.1	189.8	166.5	38.1	33.6	34.1	64.8	67.6	947.5
1975	45.2	47.3	34.2	12.2	0.0	0.0	333.4	38.1	33.6	21.9	64.8	67.6	698.3
AVERAGE	43.0	42.8	27.5	15.1	55.5	64.0	115.3	38.1	33.6	32.7	67.9	70.2	605.7
MEDIAN	26.8	46.9	25.3	18.2	36.1	46.5	83.8	38.1	33.6	26.6	64.8	67.6	535.4
80 PERCENTILE	23.0	22.0	23.0	8.4	1.3	11.9	39.3	38.1	33.6	21.9	64.8	67.6	453.7
60 PERCENTILE	26.3	43.7	23.4	16.8	21.2	31.6	60.1	38.1	33.6	24.6	64.8	67.6	511.4
40 PERCENTILE	43.8	50.6	26.8	18.2	61.4	71.9	107.5	38.1	33.6	33.6	64.8	67.6	619.8
20 PERCENTILE	70.6	55.9	30.3	18.2	108.2	118.9	190.4	38.1	33.6	43.7	68.8	69.7	748.0
MAXIMUM	98.5	58.1	43.5	18.2	179.1	189.8	290.1	38.1	33.6	74.5	99.6	100.5	968.8
MINIMUM	21.5	22.0	23.0	4.4	0.0	0.0	39.3	38.1	33.6	21.9	64.8	67.6	337.7

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 DEVELOPMENT LEVEL

78/02/16.

INFLOW YELLOWTAIL RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	159.7	126.1	135.5	65.1	120.8	130.4	46.8	102.7	123.5	132.3	164.9	149.3	1496.9
1940	113.8	144.5	80.9	57.2	71.6	135.6	72.5	95.1	129.6	143.8	137.1	136.9	1336.8
1941	100.1	104.6	152.3	126.5	191.9	267.5	120.5	246.8	212.8	272.5	292.6	258.2	2345.7
1942	240.0	208.9	239.2	240.8	300.6	401.1	218.5	113.8	144.7	176.2	206.0	177.6	2667.3
1943	95.3	170.4	274.2	268.0	359.6	496.0	593.2	136.0	141.1	190.2	220.7	189.5	3134.1
1944	180.3	165.4	211.8	242.8	395.0	557.0	377.1	125.7	148.2	154.5	194.1	160.3	2912.2
1945	127.7	131.0	205.3	164.3	159.8	367.2	449.4	169.6	210.9	234.0	241.5	225.7	2686.3
1946	215.9	196.0	166.8	160.8	181.6	251.0	173.9	132.2	201.8	185.2	211.8	200.9	2277.9
1947	135.6	168.1	243.4	300.8	445.1	470.0	593.4	188.0	142.5	232.2	240.7	222.3	3382.2
1948	205.0	235.5	252.5	182.9	284.4	349.6	182.9	132.4	153.5	163.4	198.2	159.8	2500.0
1949	127.2	124.3	232.2	156.0	232.9	331.4	151.6	106.2	148.7	185.3	216.2	198.1	2210.1
1950	142.7	176.9	216.0	187.2	196.2	277.7	350.3	155.1	148.5	252.6	252.0	252.1	2667.3
1951	223.8	231.0	226.4	212.7	233.5	353.3	513.1	240.4	156.0	246.9	258.1	225.6	3120.6
1952	243.5	217.2	185.1	211.0	345.6	347.0	164.4	119.7	120.0	159.0	193.5	190.2	2496.2
1953	154.1	164.1	115.6	102.1	85.6	257.3	136.5	114.7	122.8	157.9	206.3	191.2	1808.3
1954	138.4	166.9	134.3	107.9	186.0	175.0	172.1	104.9	121.6	160.7	191.9	184.7	1844.3
1955	112.3	126.8	101.6	98.9	127.5	209.1	80.6	109.7	128.8	164.0	178.9	179.8	1618.0
1956	128.2	124.9	239.6	182.6	377.8	400.3	195.1	109.9	133.9	149.3	182.3	171.9	2395.5
1957	111.0	159.7	203.8	235.4	420.0	632.2	380.8	136.2	148.5	229.7	248.7	224.8	3130.7
1958	191.5	196.4	129.5	94.7	257.4	246.6	65.5	136.0	131.8	158.8	195.4	189.0	1992.5
1959	140.5	143.6	135.2	88.5	123.8	261.0	149.7	110.8	137.7	189.0	190.9	189.6	1860.2
1960	132.0	141.5	131.5	57.7	15.4	85.5	15.0	108.3	145.1	132.8	158.3	143.6	1286.5
1961	96.7	117.7	97.1	56.3	80.9	99.5	42.7	94.7	183.6	180.2	191.3	162.4	1403.2
1962	106.8	227.1	261.5	247.7	325.3	430.2	296.7	148.6	143.8	184.7	207.0	173.7	2773.1
1963	132.3	212.3	166.7	154.7	298.9	529.5	221.0	132.5	186.4	195.5	225.8	185.7	2641.2
1964	152.6	182.2	180.5	179.4	308.5	512.2	365.5	138.8	154.7	171.4	202.7	175.4	2723.9
1965	155.0	170.4	216.6	279.0	422.7	661.4	604.8	230.2	199.7	266.5	206.4	234.6	3647.1
1966	212.9	194.2	74.9	41.5	37.2	30.7	26.2	105.1	137.0	152.0	185.3	181.4	1378.4
1967	145.1	150.4	222.9	265.6	229.2	858.6	709.8	146.6	182.0	217.9	215.0	220.1	3563.1
1968	209.7	230.7	180.2	127.2	172.4	506.1	231.6	232.4	182.3	235.8	249.9	228.3	2786.7
1969	219.6	215.4	170.7	168.6	206.6	264.7	177.4	127.6	136.3	192.8	207.9	198.4	2286.0
1970	145.0	188.3	138.0	97.2	351.8	427.8	246.0	127.4	154.4	181.4	205.3	186.8	2449.3
1971	180.5	185.6	224.1	299.4	495.7	620.0	443.1	135.4	175.5	290.8	275.2	241.2	3566.4
1972	230.8	259.5	281.0	205.9	256.4	448.7	197.3	189.0	164.7	214.4	232.5	196.8	2876.8
1973	186.3	195.8	217.1	178.7	375.6	382.0	218.5	137.4	326.9	251.1	256.9	242.7	2948.9
1974	234.5	218.2	215.5	219.1	421.0	506.0	319.2	132.4	140.2	198.7	217.1	191.0	3034.0
1975	175.3	186.0	243.4	218.2	303.9	447.4	690.9	175.5	166.3	68.4	110.1	111.8	2897.1
AVERAGE	162.8	177.7	186.6	169.8	254.0	371.0	270.6	141.8	161.2	191.7	210.0	193.8	2490.9
MEDIAN	152.6	170.4	185.1	168.6	233.5	353.3	197.3	132.4	148.7	185.2	206.4	189.6	2500.0
80 PERCENTILE	113.8	131.0	131.5	94.7	123.8	209.1	80.6	108.3	131.8	158.8	190.9	171.9	1808.3
60 PERCENTILE	138.4	145.4	166.8	154.7	196.2	277.7	173.9	125.7	144.7	176.2	202.7	185.7	2345.7
40 PERCENTILE	162.7	188.3	216.0	182.9	298.9	401.1	231.6	136.0	156.0	192.8	215.0	196.8	2686.3
20 PERCENTILE	212.9	215.4	232.2	240.8	375.6	506.1	380.8	155.1	183.6	234.0	241.5	225.6	3034.0
MAXIMUM	243.5	259.5	281.0	300.8	495.7	858.6	709.8	246.8	326.9	290.8	292.6	258.2	3647.1
MINIMUM	95.3	104.6	74.9	41.5	15.4	30.7	15.0	94.7	120.0	132.3	137.1	136.9	1286.5

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1979 DEVELOPMENT LEVEL

78/02/16.

BIGHORN RIVER AT ST XAVIER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	172.7	172.6	172.8	127.9	113.8	113.9	113.0	124.3	131.6	163.3	166.3	170.2	1742.3
1940	124.3	124.4	132.8	139.9	78.1	120.6	67.9	88.0	124.1	144.3	138.2	137.8	1436.4
1941	180.7	185.1	197.9	142.1	126.5	118.8	117.1	187.1	191.0	196.2	195.4	194.5	1812.0
1942	288.3	288.2	288.4	190.4	195.8	291.4	297.2	171.2	174.8	179.2	178.2	177.2	2619.8
1943	298.9	298.8	299.0	244.7	252.9	381.2	631.9	183.0	186.2	191.0	190.1	189.0	3086.8
1944	284.8	284.7	284.9	266.1	275.4	328.9	415.8	164.1	167.3	172.0	171.0	170.0	2864.8
1945	213.6	213.5	213.7	128.2	112.3	126.1	488.0	223.9	227.1	231.9	230.9	229.8	2639.1
1946	251.8	251.7	251.9	137.5	111.2	111.1	131.7	194.0	197.2	202.0	201.0	200.0	2231.3
1947	241.3	241.2	241.4	272.4	282.0	396.5	632.1	212.7	215.9	220.6	219.6	218.6	3354.3
1948	289.9	289.8	290.0	152.7	156.3	183.0	221.6	169.0	172.2	176.9	175.9	174.9	2452.2
1949	220.2	220.0	220.3	128.6	123.7	143.2	190.3	178.4	181.7	186.5	185.6	184.6	2163.0
1950	284.1	284.0	284.2	137.4	110.5	110.6	376.8	227.6	230.9	235.7	234.7	233.8	2620.3
1951	286.0	285.8	286.1	147.5	150.8	176.3	551.8	232.9	236.0	240.7	239.7	238.7	3072.4
1952	274.2	274.1	274.3	178.7	183.6	216.2	203.1	164.0	167.2	172.0	171.0	170.1	2446.6
1953	203.5	203.4	203.6	127.9	114.2	113.7	127.2	129.3	133.0	152.5	144.2	120.5	1773.1
1954	203.5	203.4	203.6	127.9	112.1	111.9	103.3	140.8	144.3	150.1	147.9	146.9	1795.7
1955	172.5	172.4	172.6	127.9	113.3	112.9	107.1	117.2	123.7	153.1	144.9	121.3	1639.1
1956	202.6	202.5	202.7	195.8	201.6	238.4	233.8	157.0	160.2	165.0	164.0	143.0	2286.4
1957	217.1	216.9	217.2	293.9	304.6	364.8	419.5	205.1	208.4	213.2	212.3	211.3	3084.3
1958	231.4	231.3	231.5	129.2	112.4	111.1	101.8	154.7	158.1	163.0	162.1	161.1	1947.6
1959	198.7	198.5	198.8	128.4	114.3	113.1	140.4	139.9	143.5	151.1	146.4	145.4	1818.6
1960	200.6	200.4	200.7	126.9	114.9	116.5	113.7	97.2	139.6	133.7	159.5	144.5	1748.2
1961	97.3	118.2	97.8	56.8	77.5	91.7	31.3	83.7	143.3	172.1	192.6	163.3	1325.6
1962	193.8	192.1	133.8	184.4	189.6	223.9	335.4	183.1	186.3	191.0	190.0	188.9	2272.4
1963	229.4	229.2	229.5	202.5	208.6	247.6	259.6	192.7	195.9	200.7	199.7	198.7	2594.4
1964	230.7	230.6	230.8	207.7	214.0	254.1	404.1	176.1	179.3	184.1	183.1	182.0	2676.7
1965	239.6	239.4	239.7	316.6	328.4	393.9	643.4	235.0	238.1	242.8	241.7	240.7	3599.3
1966	219.6	219.5	219.7	126.9	114.6	116.5	76.6	94.0	131.5	152.9	186.5	182.3	1840.3
1967	134.2	133.3	136.9	251.9	260.6	312.1	748.4	203.9	207.1	211.9	210.9	209.9	3021.0
1968	245.8	245.7	245.9	149.3	152.8	179.5	270.3	233.3	236.4	241.1	240.1	239.0	2739.3
1969	240.8	240.7	240.9	127.7	110.8	110.7	182.0	180.2	183.4	188.2	187.2	186.2	2239.0
1970	216.0	215.9	216.1	170.6	175.2	206.5	284.7	178.6	181.8	186.6	185.6	184.6	2402.2
1971	255.7	255.5	255.8	332.1	344.7	413.6	481.8	291.2	294.4	239.4	238.4	237.4	3520.0
1972	316.0	315.9	316.1	140.9	185.9	219.5	236.0	207.0	210.2	214.9	213.9	212.8	2829.1
1973	258.7	258.5	258.8	148.5	193.9	229.0	257.2	250.5	253.9	258.7	257.6	256.5	2921.6
1974	282.0	281.9	282.1	251.5	260.0	310.0	357.9	187.4	190.7	195.5	194.5	193.4	2986.8
1975	240.5	240.4	240.6	198.5	204.4	242.0	729.6	173.9	177.0	183.7	139.2	138.1	2847.6
AVERAGE	222.2	222.7	223.6	177.8	175.2	201.4	298.5	173.7	181.7	190.2	190.3	187.0	2444.1
MEDIAN	229.4	229.2	229.5	149.3	152.8	179.5	236.0	178.6	181.8	186.6	187.2	186.6	2488.6
80 PERCENTILE	172.7	172.6	172.8	127.9	112.3	112.9	113.0	129.3	183.3	163.0	162.1	161.1	1795.7
60 PERCENTILE	216.0	215.9	216.1	129.2	114.9	120.6	190.3	169.0	172.2	176.9	183.1	177.2	2239.0
40 PERCENTILE	239.6	239.4	239.7	180.9	185.9	219.5	270.3	187.1	190.7	195.5	194.5	193.4	2620.3
20 PERCENTILE	260.8	260.7	260.9	244.7	252.9	301.2	419.5	212.7	215.9	220.6	219.6	218.6	2986.8
MAXIMUM	316.0	315.9	316.1	332.1	344.7	413.6	748.4	250.5	253.9	258.7	257.6	256.5	3599.3
MINIMUM	97.3	118.1	97.8	56.8	77.5	91.7	31.3	83.7	139.7	139.7	138.2	120.5	1325.6

STUDY NO. 1

YELLOWSTONE LEVEL 4 OPERATION STUDY
1975 WITHOUT DEVELOPMENT LEVEL

78/02/17.

TONGUE RIVER AT MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	8.5	10.9	37.1	17.8	3.9	40.2	1.9	0.9	2.4	19.1	8.0	9.2	176.8
1940	7.5	8.1	11.1	2.9	4.8	28.2	7.2	0.0	0.0	20.3	6.9	7.1	93.9
1941	7.9	6.6	7.3	2.7	15.6	47.3	0.0	.2	17.5	32.9	35.6	20.0	192.7
1942	12.4	8.6	26.6	22.4	39.0	190.2	11.1	0.0	7.2	29.3	31.8	20.0	398.6
1943	12.1	19.2	47.2	70.1	47.0	110.2	11.1	0.0	7.2	18.3	30.3	14.0	390.7
1944	10.6	8.2	35.2	29.1	43.0	224.2	105.1	0.0	.7	16.3	35.3	19.0	564.7
1945	12.4	10.2	25.2	20.6	23.0	128.2	49.1	0.0	9.2	40.3	31.3	16.5	366.0
1946	14.6	12.7	52.2	31.5	38.2	107.5	35.6	6.2	20.6	41.4	34.5	22.1	417.1
1947	24.9	18.5	90.9	47.1	83.3	92.1	48.3	2.6	7.4	18.4	28.4	18.6	470.5
1948	15.0	17.9	47.0	42.6	65.3	93.7	67.6	7.4	3.6	19.8	33.7	11.2	413.9
1949	10.2	6.4	84.7	29.0	46.3	42.2	.4	0.0	.1	11.6	27.5	26.5	304.9
1950	10.9	8.8	21.2	24.0	29.5	32.6	14.4	3.5	12.6	22.4	25.0	13.7	218.6
1951	13.3	12.5	13.7	14.0	25.7	28.1	23.4	12.4	26.8	21.5	32.3	12.2	235.9
1952	9.0	9.5	31.2	86.7	61.9	55.1	10.5	2.2	5.0	21.9	14.0	13.2	320.2
1953	11.6	9.2	13.1	8.3	22.4	98.4	1.8	0.0	0.0	16.8	24.2	12.7	218.7
1954	11.4	14.5	13.8	13.3	12.6	10.8	0.0	3.6	.3	6.0	13.4	13.2	112.9
1955	9.9	5.9	15.7	26.8	47.8	67.5	20.2	.1	0.0	3.7	8.5	9.9	216.0
1956	10.3	9.2	29.5	52.6	34.7	55.8	0.0	2.9	1.9	5.9	18.2	14.3	235.3
1957	8.6	7.9	14.5	21.7	25.7	112.7	28.9	2.3	15.4	16.6	10.6	10.6	275.5
1958	10.7	9.5	14.0	12.0	28.3	30.8	27.7	.8	.1	14.6	16.0	15.4	179.9
1959	12.6	10.7	91.0	31.6	23.8	16.7	3.0	9.4	9.4	8.2	10.8	13.4	240.8
1960	12.2	11.0	49.7	19.7	1.1	0.0	0.0	0.0	0.0	1.6	6.2	4.9	106.6
1961	5.3	5.7	4.8	.7	0.8	0.0	0.0	0.0	2.5	6.1	5.4	8.7	39.2
1962	8.9	15.3	34.7	36.6	45.7	121.1	18.6	4.0	11.2	15.8	13.0	11.1	336.0
1963	8.7	38.5	28.3	13.7	83.0	168.1	16.3	3.8	9.5	2.8	5.6	5.0	383.3
1964	9.3	10.6	12.0	18.1	47.9	143.9	52.2	12.6	14.8	14.0	12.5	11.1	359.0
1965	14.2	26.9	37.1	100.7	57.1	76.5	48.2	8.1	17.1	36.5	20.5	12.1	467.0
1966	9.4	8.1	15.5	6.4	8.6	9.1	2.8	1.5	4.2	2.6	6.0	6.8	83.0
1967	10.1	13.2	19.2	20.5	35.7	205.0	43.5	8.3	16.9	14.7	19.9	15.0	442.0
1968	17.8	30.7	47.9	26.8	30.0	159.7	37.2	32.2	33.8	33.5	19.0	12.6	481.2
1969	12.9	12.1	93.1	62.5	65.2	45.6	52.5	6.9	9.5	12.8	8.8	14.0	395.9
1970	13.5	14.3	25.1	35.9	91.7	157.4	27.8	5.6	11.0	16.8	17.2	13.0	429.8
1971	11.9	99.8	109.8	58.5	69.6	97.9	11.2	3.5	11.9	43.0	21.6	12.6	551.3
1972	10.6	16.5	95.2	56.7	45.9	90.0	19.1	12.5	14.1	23.3	20.5	10.7	407.1
1973	18.7	15.6	17.3	18.7	83.1	114.3	23.3	10.2	22.5	29.1	23.9	10.3	383.0
1974	26.1	20.1	18.7	20.6	46.1	74.5	20.4	10.8	7.9	14.3	18.2	20.0	297.7
1975	30.9	10.0	40.1	49.9	109.2	161.2	135.1	42.5	15.2	0.0	0.0	0.0	614.1
AVERAGE	12.4	15.5	37.6	31.2	42.7	85.1	26.7	5.8	9.4	18.2	18.8	13.1	316.5
MEDIAN	10.9	10.7	26.6	22.4	38.2	76.5	18.6	2.9	7.9	16.8	18.2	12.7	308.6
80 PERCENTILE	8.9	8.1	13.8	13.3	15.6	28.1	1.0	0.0	.3	6.1	8.5	9.9	179.9
60 PERCENTILE	10.3	9.5	19.2	20.5	29.5	69.2	11.1	1.5	5.0	14.7	14.0	12.1	240.8
40 PERCENTILE	12.1	12.7	38.7	29.0	46.1	97.9	23.3	3.8	9.5	19.1	20.5	13.4	366.0
20 PERCENTILE	13.5	16.5	89.7	67.1	65.2	121.1	40.2	8.3	15.4	29.1	30.3	18.0	417.1
MAXIMUM	26.1	99.8	109.8	100.7	91.7	224.2	105.1	32.2	33.8	43.0	35.6	26.5	564.7
MINIMUM	5.3	5.7	4.8	.7	0.0	0.0	0.0	0.0	0.0	1.6	5.4	4.9	39.2

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 WITHOUT DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER AT MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	341.6	257.0	440.4	405.7	823.1	1283.0	566.3	272.1	226.8	387.5	324.6	299.3	5667.4
1940	197.9	253.8	330.2	360.6	708.6	1329.0	362.7	137.8	190.4	442.3	299.7	291.6	4904.6
1941	225.8	241.2	329.3	341.0	692.7	1112.5	484.3	385.6	755.5	750.5	563.0	477.9	6319.3
1942	473.4	467.0	654.5	584.5	1054.0	1863.5	1175.7	434.4	374.1	472.2	447.5	399.1	8404.9
1943	401.8	622.8	860.4	899.7	1052.2	2637.4	2307.8	732.2	525.5	493.0	482.7	422.4	11437.9
1944	417.4	378.1	545.1	501.5	884.0	2714.8	1703.5	482.2	441.9	465.2	446.0	329.8	9414.5
1945	411.8	392.2	559.9	339.2	582.2	1790.3	1808.0	627.7	492.7	586.8	518.1	392.1	8501.0
1946	491.2	454.5	556.6	477.3	757.4	1512.5	765.5	383.6	487.9	563.5	483.9	390.5	7320.0
1947	331.6	330.5	599.7	672.1	1376.5	1840.6	1653.3	585.6	486.9	593.0	525.7	460.9	9456.4
1948	448.3	443.6	659.6	510.6	1127.8	2532.6	1201.9	488.4	321.8	442.1	451.1	284.2	8928.0
1949	286.5	342.6	630.6	505.3	1035.4	1580.3	778.6	339.3	388.9	469.0	453.6	307.7	7117.8
1950	313.9	373.2	700.8	553.6	658.9	1772.5	1747.6	721.8	584.5	661.1	561.6	502.3	9111.6
1951	462.2	472.4	687.8	512.8	993.2	1585.8	1638.4	877.6	619.8	624.1	567.8	459.4	9461.3
1952	453.5	463.9	668.2	718.6	1456.6	1861.8	973.9	521.4	395.6	425.7	392.5	341.0	8670.7
1953	413.5	365.3	427.9	328.2	483.5	1781.9	928.0	414.7	290.8	364.0	382.1	327.5	6507.4
1954	331.7	413.7	385.5	352.7	939.0	1130.2	1029.6	429.5	296.6	374.9	372.4	330.5	6386.3
1955	308.1	321.1	320.3	517.2	647.4	1361.9	712.9	297.1	236.7	370.4	320.2	338.9	5772.2
1956	397.6	346.0	620.4	580.7	1319.3	2293.8	923.7	447.3	374.7	392.0	447.3	356.2	8539.0
1957	327.5	369.8	477.6	577.4	1258.4	2798.6	1605.7	493.9	536.1	515.5	504.9	435.7	9901.1
1958	421.1	408.6	463.7	348.7	1020.9	1425.7	649.1	338.2	307.1	378.3	387.1	354.6	6503.1
1959	356.9	350.4	767.7	398.1	614.1	1916.3	971.4	357.8	332.9	463.2	409.4	397.6	7335.8
1960	329.7	374.7	548.3	382.2	475.8	1189.0	359.5	282.8	284.6	330.5	374.0	285.8	5136.9
1961	276.0	289.7	264.0	185.1	374.5	1193.9	235.1	133.1	424.5	539.3	517.1	340.5	4732.8
1962	302.1	435.7	466.6	577.0	1022.7	2104.6	1343.2	564.3	503.5	512.5	484.2	400.0	8676.4
1963	389.5	563.4	482.6	428.8	1054.0	2179.5	945.4	343.4	452.6	409.2	431.8	343.1	8043.3
1964	406.9	420.5	392.2	488.4	987.6	2195.1	1722.3	522.6	452.4	419.6	430.3	389.8	8827.7
1965	515.0	495.7	536.2	840.8	1099.2	2439.2	2185.6	817.9	717.4	682.0	443.8	425.5	11238.3
1966	372.7	373.5	545.5	372.3	729.3	1053.3	477.8	238.2	255.0	345.1	396.9	403.2	5562.8
1967	345.3	332.3	355.9	458.9	867.4	2479.1	2577.0	658.3	481.7	539.4	518.4	501.3	10115.0
1968	631.5	675.4	671.2	454.5	685.0	2405.6	1485.4	751.2	706.7	635.8	554.1	447.4	10103.8
1969	525.1	484.0	837.0	566.2	1104.6	1397.0	1320.4	524.5	409.7	479.5	445.1	475.4	8568.5
1970	506.6	499.6	631.4	369.0	1246.2	2418.6	1592.1	514.1	484.2	524.8	489.8	454.7	9531.3
1971	557.6	962.3	831.5	871.3	1278.2	2448.6	1656.1	681.1	610.7	743.7	598.4	510.0	11769.5
1972	503.6	550.0	1105.8	666.4	1028.5	2101.3	1130.5	644.6	589.6	673.1	639.0	404.3	10039.7
1973	543.9	548.3	550.7	549.2	1207.0	1630.9	886.7	515.6	585.2	612.9	688.1	532.2	8840.7
1974	532.1	519.6	569.1	666.6	903.2	2639.3	1835.7	666.1	533.7	537.1	594.6	476.4	10473.5
1975	557.9	495.8	705.5	628.2	1388.5	2178.2	2778.0	886.5	487.0	0.0	0.0	0.0	10105.6
AVERAGE	409.3	435.4	570.2	513.3	944.9	1896.0	1256.2	499.8	447.7	492.4	456.9	386.2	8308.8
MEDIAN	401.8	406.6	550.7	501.5	987.6	1840.6	1130.5	488.4	452.4	479.5	447.5	397.6	8568.5
80 PERCENTILE	313.9	332.3	392.2	360.6	667.4	1329.0	649.1	338.2	296.6	387.5	387.1	329.8	6319.3
60 PERCENTILE	361.6	374.7	482.6	458.5	847.4	1620.9	945.4	429.5	393.6	463.2	444.2	356.2	8043.3
40 PERCENTILE	417.4	483.6	599.7	517.2	1028.5	2101.3	1343.2	521.4	486.9	524.8	483.9	404.3	8840.7
20 PERCENTILE	503.6	499.6	671.2	584.5	1127.8	2439.2	1703.5	658.3	584.5	612.9	554.1	460.9	9901.1
MAXIMUM	631.5	962.3	1105.8	899.7	1456.6	2798.6	2577.0	877.6	755.5	750.5	688.1	532.2	11769.5
MINIMUM	197.9	241.2	264.0	185.1	374.5	1053.3	235.1	133.1	190.4	330.5	299.7	284.2	4732.8

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 WITHOUT DEVELOPMENT LEVEL

78/02/17.

POWDER RIVER AT ARVADA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	7.9	3.7	29.0	10.1	19.9	19.3	0.0	0.0	0.0	4.6	4.7	6.8	106.0
1940	3.8	8.4	17.7	19.2	12.1	19.3	4.8	0.0	1.1	25.2	4.2	5.6	121.4
1941	5.4	6.3	10.7	64.4	77.9	22.8	48.2	51.6	13.2	16.6	13.5	11.4	342.0
1942	5.0	6.4	15.6	29.7	43.3	14.3	2.5	7.2	.2	6.1	7.7	5.4	143.4
1943	6.7	8.6	38.2	41.2	36.5	54.2	9.2	0.0	0.0	2.9	5.3	4.1	206.9
1944	2.6	5.0	5.4	33.0	95.7	90.5	22.3	2.3	0.0	6.2	7.3	6.7	278.0
1945	6.1	8.1	31.1	38.0	34.2	61.0	22.9	9.8	6.3	9.2	10.6	5.9	243.2
1946	9.1	11.7	18.1	23.1	25.7	32.5	20.1	0.0	9.0	8.6	9.6	7.4	174.9
1947	5.5	9.4	57.0	18.4	82.9	42.5	18.6	0.0	.6	5.0	8.7	6.4	255.0
1948	5.0	12.0	51.7	13.5	29.2	74.4	22.3	3.2	2.6	7.7	7.7	5.0	234.3
1949	3.6	3.5	52.8	18.1	30.5	36.3	5.7	0.0	0.0	5.3	5.4	1.2	162.4
1950	1.7	2.7	12.3	21.2	50.6	16.1	1.8	0.0	0.0	5.9	6.6	2.2	121.1
1951	3.8	4.1	13.4	8.5	15.5	2.3	0.0	2.8	17.5	6.9	6.3	4.4	85.5
1952	2.1	5.1	13.9	21.0	70.5	12.1	8.9	1.0	0.0	1.3	3.9	2.7	142.5
1953	4.8	5.9	17.1	9.1	6.7	34.1	2.2	12.3	0.0	0.0	2.9	3.2	98.3
1954	3.4	11.2	13.0	14.8	13.0	0.0	2.5	7.1	0.0	.2	3.5	1.9	70.6
1955	2.2	2.9	43.0	29.5	27.6	40.6	7.4	10.5	.1	1.3	2.4	12.3	179.8
1956	5.8	6.5	36.3	14.0	18.8	12.8	4.3	2.7	0.0	0.0	2.2	4.2	107.6
1957	3.5	1.6	12.8	12.8	27.1	62.6	12.9	1.2	2.7	5.8	7.9	6.6	157.5
1958	5.2	4.3	11.6	15.0	27.4	19.7	26.6	2.7	0.0	1.0	4.9	3.9	122.3
1959	3.7	3.2	20.9	9.8	27.3	21.9	10.5	0.0	0.0	2.0	2.3	4.0	105.6
1960	2.8	4.7	36.1	13.5	5.4	3.3	.9	.1	0.0	0.0	1.7	1.6	70.1
1961	2.2	2.6	7.8	4.8	13.3	3.3	1.9	0.0	.2	9.4	5.9	2.2	53.6
1962	1.9	25.2	14.6	25.9	122.8	195.4	47.8	13.5	10.9	23.2	10.2	8.6	498.0
1963	7.2	14.4	13.2	13.4	32.7	52.4	9.5	.6	10.2	3.8	6.5	4.7	168.6
1964	5.4	4.0	12.2	27.0	37.7	101.6	18.8	.4	0.0	2.4	6.4	5.8	221.7
1965	8.7	13.0	28.7	40.1	45.9	63.8	27.5	8.4	4.8	8.4	7.7	5.0	262.0
1966	4.4	5.2	20.4	15.7	16.7	5.6	.8	0.0	6.5	2.7	6.0	3.6	87.6
1967	4.5	6.1	12.4	10.3	29.5	159.6	46.7	4.5	6.9	8.2	9.0	4.6	302.3
1968	4.5	7.2	21.2	13.3	43.7	126.3	19.7	11.1	10.8	10.2	8.5	6.9	283.4
1969	8.6	6.7	18.6	14.7	17.4	14.6	9.2	0.0	0.0	3.0	6.4	4.4	103.6
1970	5.6	8.8	16.2	12.3	66.7	49.0	11.1	0.0	0.0	4.9	7.7	6.4	188.7
1971	4.3	8.5	36.2	16.4	52.4	54.0	3.6	0.0	.5	6.8	8.9	6.1	198.1
1972	5.1	32.1	37.9	20.4	48.4	36.9	5.3	10.8	5.4	9.4	8.7	4.6	225.0
1973	5.4	7.2	19.9	39.2	78.6	26.8	24.8	4.7	18.9	13.3	18.0	17.8	274.6
1974	14.8	11.6	16.8	39.3	21.6	7.6	.5	1.7	.6	5.7	8.2	5.8	134.2
1975	4.7	4.8	15.9	20.9	41.1	101.4	28.6	4.0	1.1	0.0	0.0	0.0	222.5
AVERAGE	5.1	7.9	23.0	21.3	39.1	45.7	13.8	4.7	3.5	6.3	6.7	5.4	182.5
MEDIAN	4.8	6.4	17.7	16.4	29.5	32.5	9.2	1.2	.2	5.7	6.5	5.0	162.4
80 PERCENTILE	2.8	3.5	12.4	12.3	16.7	12.1	1.9	0.0	0.0	1.3	3.9	3.2	103.6
60 PERCENTILE	4.3	5.2	15.6	14.7	27.3	19.7	5.3	.1	0.0	4.6	6.0	4.4	134.2
40 PERCENTILE	5.2	7.2	20.4	20.4	36.5	40.6	11.1	2.7	1.1	6.2	7.7	5.8	188.7
20 PERCENTILE	6.1	11.2	36.2	29.7	52.4	62.6	22.3	8.4	6.9	9.2	8.7	6.7	255.0
MAXIMUM	14.8	32.1	57.0	64.4	122.8	195.4	48.2	51.6	18.9	25.2	18.0	17.8	498.0
MINIMUM	1.7	1.6	7.8	4.8	5.4	0.0	0.0	0.0	0.0	0.0	1.7	1.2	53.6

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 WITHOUT DEVELOPMENT LEVEL

78/02/17.

POWDER RIVER AT LOCATE

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	8.9	4.1	125.8	23.6	30.8	54.2	6.9	0.0	0.0	3.0	4.0	5.7	267.0
1940	2.2	1.4	27.9	25.7	16.7	36.3	28.6	9.2	1.9	56.6	8.1	13.0	227.6
1941	8.0	10.4	22.0	63.2	166.2	69.5	38.6	44.7	51.7	39.3	21.9	25.8	581.3
1942	6.3	10.9	60.8	44.9	77.5	73.7	6.8	12.6	0.0	9.6	8.4	10.1	321.6
1943	11.7	213.2	152.6	49.7	54.3	146.3	37.7	5.5	4.8	3.7	8.8	6.5	714.8
1944	4.1	2.9	232.0	129.3	180.8	469.5	88.6	11.7	3.7	6.5	10.4	8.5	1148.0
1945	6.4	15.3	61.0	39.1	43.6	147.0	52.8	24.0	14.5	15.7	14.0	9.9	443.3
1946	16.5	22.6	60.0	41.6	66.2	97.8	56.5	10.4	24.1	42.4	19.4	20.4	477.9
1947	15.6	37.6	198.6	67.2	132.8	100.7	49.7	2.3	0.0	7.5	10.0	10.2	632.2
1948	6.5	102.2	206.9	34.9	56.5	126.2	74.6	17.3	3.2	12.7	16.5	5.5	663.0
1949	4.5	3.4	228.9	45.3	57.9	79.7	12.0	0.0	0.0	8.9	13.4	3.9	457.9
1950	.4	0.0	1.5	69.1	80.2	53.3	13.2	3.1	0.0	10.9	7.5	8.1	247.3
1951	5.2	6.0	26.0	22.6	20.9	11.1	8.7	19.5	35.8	16.6	19.6	23.7	215.7
1952	5.1	11.8	103.6	108.2	90.2	44.4	22.4	4.3	1.6	3.2	6.2	6.3	407.3
1953	7.6	10.8	32.0	16.4	22.1	108.8	3.4	26.4	0.0	4.5	4.5	7.9	244.4
1954	7.4	19.5	25.0	13.3	22.3	.8	0.0	16.8	10.1	.5	3.9	5.4	125.0
1955	4.1	3.5	33.1	85.8	46.4	59.8	25.3	10.3	0.0	.7	2.7	4.8	276.5
1956	7.4	4.8	73.7	27.4	40.0	40.7	3.3	6.6	.4	.4	4.1	7.2	216.0
1957	5.4	4.1	23.4	17.9	19.3	134.0	33.4	2.3	4.0	7.7	11.5	7.8	270.8
1958	9.7	10.1	18.0	21.9	43.4	51.8	52.4	12.3	0.0	3.9	5.2	8.9	237.6
1959	6.6	6.6	161.8	26.1	31.3	34.7	17.2	0.0	0.0	4.1	6.7	10.3	305.4
1960	6.6	8.5	125.7	26.2	2.3	3.8	0.0	0.0	0.0	0.0	.9	.8	174.8
1961	1.3	1.8	16.0	4.0	1.7	4.1	0.0	0.0	3.1	7.0	5.4	3.1	47.5
1962	2.2	76.5	51.6	39.4	133.3	262.2	119.0	24.0	11.3	28.5	16.5	9.9	774.4
1963	7.7	63.0	83.9	24.9	59.9	191.1	46.4	2.3	12.7	7.5	11.5	5.8	476.7
1964	7.4	6.7	28.4	32.1	41.0	188.1	65.0	5.1	1.9	2.5	4.8	5.8	388.8
1965	10.4	15.1	14.9	180.2	64.5	107.6	43.7	13.9	8.9	16.1	13.3	7.8	496.4
1966	8.3	7.2	29.9	24.2	20.6	2.4	2.6	0.0	2.8	4.4	5.0	5.6	113.0
1967	5.9	10.4	31.9	21.8	69.3	295.5	104.2	8.4	22.9	15.4	16.3	7.0	609.0
1968	6.5	25.7	120.3	30.4	50.5	217.3	41.4	38.6	29.5	17.7	18.8	8.2	604.9
1969	11.3	9.2	135.9	73.5	60.4	28.0	46.7	3.8	0.0	3.6	11.4	5.9	389.7
1970	7.2	14.2	54.8	32.2	110.3	130.5	24.0	.5	0.0	6.1	13.3	7.2	400.3
1971	5.4	112.6	177.3	69.6	71.7	154.5	16.4	.3	1.2	54.0	22.1	6.2	691.3
1972	7.9	78.3	283.7	41.9	61.3	90.0	26.4	21.2	17.9	20.3	21.7	6.8	677.4
1973	11.4	13.5	37.2	43.7	118.2	99.1	26.1	15.5	38.4	20.9	18.8	8.5	451.3
1974	28.2	32.3	45.3	54.7	59.3	39.4	9.5	7.1	8.3	15.9	19.1	12.5	331.6
1975	11.0	13.0	59.3	50.7	122.1	170.5	95.7	11.4	2.8	0.0	0.0	0.0	536.5
AVERAGE	7.8	26.7	84.6	47.1	63.4	106.1	35.1	11.1	8.6	12.9	11.0	8.4	422.8
MEDIAN	6.6	10.4	51.6	34.9	56.5	79.7	26.1	7.1	2.8	7.5	10.4	7.2	389.7
80 PERCENTILE	4.5	4.1	25.0	22.6	22.1	34.7	6.8	.3	0.0	3.2	4.8	5.6	227.6
60 PERCENTILE	6.4	6.5	33.1	27.4	43.6	54.2	17.2	4.3	1.2	6.1	8.1	6.5	305.4
40 PERCENTILE	7.4	13.5	61.0	41.9	60.4	100.7	37.7	10.4	4.0	10.9	13.3	8.1	451.3
20 PERCENTILE	9.7	32.3	152.6	69.1	80.2	147.0	52.4	17.5	14.5	17.7	18.8	10.1	609.0
MAXIMUM	28.2	213.2	283.7	180.2	180.8	469.5	119.0	44.7	51.7	56.6	22.1	25.8	1148.0
MINIMUM	.4	0.0	1.5	4.0	1.7	.8	0.0	0.0	0.0	0.0	.9	.8	47.5

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 WITHOUT DEVELOPMENT LEVEL

76/02/17.

YELLOWSTONE RIVER AT STONEY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	378.6	271.2	730.6	414.7	852.5	1237.9	511.7	219.2	179.1	366.9	345.5	308.4	5816.3
1940	188.7	265.3	353.4	414.7	678.3	1406.0	339.6	110.2	145.2	543.4	293.9	303.1	5041.8
1941	218.9	256.4	367.2	407.1	753.8	1221.0	451.0	452.0	879.6	844.0	595.9	527.7	6974.6
1942	468.7	501.1	893.6	579.7	1040.7	1950.0	1134.7	419.2	334.9	489.5	499.8	352.8	8664.7
1943	414.5	878.7	1233.0	1077.0	1052.3	2735.2	2532.9	753.0	491.6	466.5	494.4	437.0	12566.1
1944	420.5	404.4	1039.6	800.7	962.3	3239.8	1792.1	477.7	396.0	473.9	458.9	330.0	10795.9
1945	424.9	406.2	760.1	401.7	570.7	1787.9	1915.0	615.1	478.5	599.0	521.7	365.3	8846.1
1946	520.1	434.7	699.7	462.8	713.6	1507.0	825.9	323.9	503.8	649.2	547.5	447.5	7635.7
1947	375.7	430.1	1185.7	807.1	1447.5	1828.1	1665.3	559.2	440.2	605.8	558.7	478.2	10381.6
1948	467.3	460.8	791.3	611.7	982.2	2760.6	1347.1	469.4	255.6	444.3	470.1	269.8	9330.2
1949	303.7	335.9	698.6	595.3	910.2	1597.7	761.5	283.9	321.5	455.4	457.7	306.8	7028.2
1950	299.9	397.7	706.7	874.5	640.2	1789.5	1637.4	663.0	488.9	628.1	510.7	501.8	9138.4
1951	475.6	472.5	658.5	681.4	813.8	1459.0	1523.2	838.8	625.6	611.0	590.3	365.6	9115.3
1952	470.5	557.6	758.0	1396.5	1402.3	1912.4	920.1	464.0	335.3	390.1	384.7	340.1	9331.6
1953	406.5	385.0	453.1	317.3	487.7	1926.7	881.9	382.5	228.3	342.5	378.6	307.6	6497.7
1954	282.4	504.2	419.0	473.3	904.1	1017.2	1016.8	439.2	290.9	363.4	380.1	340.0	6430.6
1955	278.0	323.8	344.2	667.1	699.5	1344.6	762.6	258.2	168.4	361.9	318.5	306.8	5833.6
1956	417.8	375.3	785.1	636.5	1176.8	2348.6	897.6	414.2	342.1	374.2	441.7	377.8	8607.7
1957	356.0	353.6	576.7	611.3	1122.2	2836.8	1592.9	438.2	468.4	498.0	504.4	430.1	9788.6
1958	418.5	360.7	567.6	400.3	878.0	1428.5	701.9	275.8	251.7	379.1	390.5	382.0	6394.6
1959	346.4	348.8	1222.1	438.5	581.5	1817.6	997.0	281.3	276.4	457.8	379.8	394.3	7541.5
1960	323.1	413.3	866.6	429.9	426.9	1108.9	299.9	171.1	179.8	310.4	367.9	260.9	5158.7
1961	293.8	293.4	328.1	146.9	244.2	1190.4	171.0	63.3	381.9	544.9	503.6	317.1	4478.6
1962	325.1	534.1	578.2	645.8	1164.3	2452.3	1659.6	568.7	475.7	552.1	477.7	428.0	9861.6
1963	402.3	678.7	651.1	462.9	1189.7	2676.6	1057.9	322.2	440.2	418.2	452.0	332.7	9084.5
1964	438.5	460.0	450.1	532.0	992.2	2422.3	1917.6	526.4	463.8	423.9	442.4	349.2	9418.4
1965	513.9	503.4	598.2	1298.2	1200.4	2765.4	2637.7	828.8	666.8	712.8	460.0	456.5	12642.1
1966	423.5	420.2	688.9	371.5	632.4	992.2	441.9	199.6	209.3	370.6	410.1	435.8	5596.0
1967	340.1	347.6	422.9	541.1	931.8	2719.8	2778.9	645.8	492.7	589.0	548.3	494.0	10852.0
1968	679.5	645.6	918.7	493.5	658.8	2552.0	1515.0	739.2	744.6	666.3	615.5	497.8	10726.5
1969	552.1	512.8	1127.3	705.0	1049.5	1348.4	1437.9	464.7	356.5	488.4	475.4	498.2	9036.2
1970	520.2	563.3	572.5	435.8	1278.7	2553.0	1597.4	475.2	440.9	591.0	508.9	508.2	9945.1
1971	602.9	1049.8	1194.3	971.8	1272.8	2739.5	1745.2	634.5	605.7	893.6	638.2	475.8	12824.1
1972	513.7	678.4	1626.1	707.5	1065.9	2209.0	1125.2	615.3	574.6	691.7	674.2	445.2	10886.8
1973	590.4	586.2	685.0	633.3	1288.5	1808.0	881.0	473.9	640.1	644.1	670.7	539.5	9460.7
1974	543.1	546.1	607.2	717.1	908.6	2609.4	1895.1	630.5	529.2	580.6	627.4	514.2	10708.5
1975	568.4	453.8	828.5	747.1	1594.3	2362.2	2984.0	886.8	519.6	0.0	0.0	0.0	10944.7
AVERAGE	420.6	469.5	740.2	619.2	934.3	1991.4	1306.9	469.8	422.3	507.6	470.7	398.8	8741.2
MEDIAN	417.8	430.1	688.9	579.7	910.2	1828.1	1125.2	464.0	440.2	489.5	475.4	377.8	9044.5
80 PERCENTILE	303.7	347.6	450.1	414.7	640.2	1344.6	701.9	275.8	251.7	374.2	380.1	308.4	6394.6
60 PERCENTILE	378.6	404.4	607.2	473.3	852.5	1787.9	920.1	419.2	342.1	457.8	458.9	349.2	8607.7
40 PERCENTILE	424.9	472.5	730.6	633.3	992.2	2209.0	1515.0	475.2	468.4	544.9	503.6	435.8	9331.6
20 PERCENTILE	513.9	557.6	918.7	717.1	1176.8	2676.6	1745.2	630.5	529.2	626.1	558.7	494.0	10708.5
MAXIMUM	679.5	1049.8	1626.1	1396.5	1447.5	3239.8	2778.9	838.8	879.6	893.6	674.2	539.5	12824.1
MINIMUM	188.7	256.4	328.1	146.9	244.2	992.2	171.0	63.3	145.2	310.4	293.9	260.9	4478.6

1985
Without Development Level

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 WITHOUT DEVELOPMENT LEVEL

77/11/30.

YELLOWSTONE RIVER AT LIVINGSTON

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	81.4	87.1	87.4	150.4	541.1	499.0	316.1	162.9	107.4	102.2	75.7	66.1	2260.0
1940	36.3	35.0	70.5	94.1	456.9	577.7	249.6	120.1	92.9	95.5	77.6	71.8	2018.4
1941	67.5	61.6	67.5	75.5	524.5	424.7	236.5	156.7	165.5	171.5	130.7	109.8	1997.9
1942	89.9	73.3	90.4	137.0	515.9	648.2	473.7	140.2	118.2	99.7	88.2	78.6	2464.4
1943	89.5	81.9	83.2	144.6	427.7	1102.9	825.6	315.9	174.1	128.5	101.8	84.9	3573.9
1944	74.1	68.4	71.9	78.5	298.5	543.5	385.7	175.1	125.2	114.3	93.8	73.4	2147.5
1945	83.9	52.7	83.5	72.2	237.4	866.4	587.1	270.2	172.3	147.2	117.8	92.6	2566.7
1946	97.9	75.9	89.1	200.6	397.9	834.9	330.2	167.4	118.6	114.5	97.0	84.5	2347.9
1947	95.3	82.4	77.4	95.7	541.1	744.7	550.4	271.9	175.5	150.1	115.6	97.6	2999.1
1948	85.5	77.9	84.5	94.5	545.9	1022.9	450.9	223.4	152.2	111.1	93.0	72.8	2971.8
1949	59.1	50.2	65.7	149.9	377.5	741.6	592.0	198.9	130.4	125.0	99.6	72.5	2670.6
1950	55.4	54.3	55.9	95.0	261.9	874.0	700.1	286.7	179.7	164.7	136.2	115.3	2983.5
1951	94.8	78.2	83.0	125.5	517.1	704.5	501.5	330.8	165.0	149.4	115.6	86.8	3041.3
1952	72.5	66.8	75.2	171.4	629.4	657.1	406.4	216.0	128.1	101.0	78.3	71.5	2859.4
1953	75.1	62.9	84.9	85.1	148.0	737.0	460.6	194.4	120.3	100.9	88.0	72.9	2261.2
1954	80.3	53.3	80.2	92.6	495.3	681.3	501.5	254.1	140.5	109.1	88.7	75.1	2650.4
1955	88.4	57.0	71.5	78.0	258.5	609.5	556.4	194.2	118.6	108.1	93.2	85.4	2077.7
1956	83.4	78.3	83.7	150.2	565.4	1097.9	511.1	225.4	152.2	114.5	95.1	79.9	3194.9
1957	80.5	81.9	78.9	73.4	417.5	847.4	495.5	222.5	139.4	117.9	95.3	82.3	2753.4
1958	86.3	80.0	79.4	90.1	473.1	547.0	255.3	152.7	100.6	81.9	83.6	80.1	2057.6
1959	85.4	84.3	82.0	88.1	235.3	958.5	474.0	198.9	127.5	129.6	101.2	90.6	2571.9
1960	79.3	71.3	91.4	114.4	284.9	630.7	249.9	147.5	98.4	94.2	87.0	75.2	2004.7
1961	83.3	80.7	84.0	79.2	250.9	614.8	225.3	125.3	120.0	140.3	119.3	93.4	1966.1
1962	83.3	83.1	91.4	173.7	505.4	907.8	543.4	257.1	147.8	124.0	107.8	95.9	3128.9
1963	85.7	79.3	77.8	85.1	417.5	851.5	418.4	192.6	135.9	114.2	99.2	82.9	2625.5
1964	85.1	83.7	83.8	84.7	383.8	877.1	658.9	258.6	151.7	117.2	101.5	90.4	2856.2
1965	85.9	75.9	81.5	116.9	381.2	1161.8	789.4	328.2	202.9	174.8	128.9	101.3	3606.2
1966	81.5	80.4	80.9	103.8	414.5	931.5	487.0	152.8	113.8	103.4	86.7	77.4	2107.3
1967	74.8	71.3	82.2	84.9	571.3	1125.8	784.8	278.9	154.7	141.5	113.4	92.8	3375.8
1968	80.3	82.1	92.7	95.2	279.4	1040.8	611.3	321.7	225.7	182.9	135.3	108.1	3252.7
1969	87.7	91.8	93.1	105.5	875.2	708.8	495.8	218.4	130.5	123.0	103.4	89.5	2983.6
1970	90.1	73.2	82.9	81.3	410.4	1090.5	805.4	285.8	176.4	146.9	117.0	101.8	3214.3
1971	90.4	91.2	93.7	113.1	495.9	1214.5	810.7	319.2	194.8	162.1	128.8	98.7	3601.0
1972	97.3	81.3	105.8	117.1	425.4	1138.8	564.9	284.7	202.3	191.8	140.0	109.9	3475.5
1973	100.0	89.1	92.4	89.0	356.5	983.1	552.8	187.7	156.2	126.3	112.2	92.8	2948.8
1974	79.4	84.1	86.4	133.1	579.4	1334.5	742.1	297.3	162.2	137.1	103.8	87.3	3806.0
1975	84.4	84.3	84.4	84.2	283.1	820.4	419.3	313.4	181.0	.0	.1	.1	2740.2
AVERAGE	79.1	71.3	83.9	114.3	402.8	824.1	505.1	227.8	148.1	124.7	101.1	84.8	2787.6
MEDIAN	79.4	83.1	84.3	93.2	413.4	741.0	474.0	216.4	135.9	125.0	101.2	85.4	2970.6

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STUDY NO. 1 CALIBRATED LEVEL B OPERATIONAL STUDY 11/11/50.
1985 WITHOUT DEVELOPMENT LEVEL

SIMULATED FLOWS AT ASSAMORA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1937	14.3	11.7	17.9	20.1	96.0	91.0	60.7	20.1	15.8	14.1	15.0	12.1	408.7
1940	14.2	12.2	11.1	13.2	101.0	204.8	71.2	25.3	24.6	21.5	18.6	16.1	544.1
1941	13.7	11.3	15.2	15.9	85.4	187.3	89.9	52.0	44.8	36.7	30.3	25.2	631.9
1946	23.3	13.6	13.7	30.3	102.1	208.9	201.2	50.0	30.5	32.4	25.9	22.6	761.5
1945	14.8	13.3	23.5	70.0	164.1	299.7	211.5	82.0	52.3	33.4	25.8	20.9	1024.1
1946	13.9	12.1	13.9	18.4	107.1	260.6	220.4	80.9	45.2	33.3	25.8	20.9	850.3
1945	15.3	13.1	13.2	23.1	79.7	211.7	225.9	74.0	45.1	30.7	25.4	19.9	765.7
1946	14.0	13.4	14.3	24.7	80.3	172.3	116.0	54.7	32.8	31.9	24.0	20.5	581.7
1947	14.3	13.2	23.1	34.3	123.7	185.6	142.3	82.4	48.4	45.1	27.5	21.7	797.4
1948	17.2	17.1	21.2	23.3	114.3	274.3	151.2	83.5	26.5	25.4	22.0	18.8	788.4
1949	13.2	12.4	13.1	23.0	113.4	171.9	97.0	57.8	33.1	24.4	22.0	16.5	590.9
1950	11.2	14.3	13.3	20.2	91.9	207.6	187.0	83.0	45.5	38.4	30.0	23.3	709.5
1951	20.3	13.4	14.4	25.0	93.7	137.0	174.1	84.3	33.7	34.7	25.4	19.0	700.1
1952	13.2	14.3	17.3	40.3	139.1	223.1	133.2	71.7	33.2	25.0	22.3	19.4	780.6
1953	17.3	15.1	13.3	19.3	95.3	180.1	136.8	53.3	26.7	21.4	20.7	16.2	575.4
1954	13.3	13.1	13.1	21.1	97.3	123.5	136.8	44.4	23.8	20.2	22.7	16.0	580.8
1955	12.4	12.0	12.7	21.4	47.2	144.4	97.3	50.4	21.8	23.1	16.3	14.0	471.8
1956	17.3	14.3	22.1	29.3	140.4	233.0	106.8	53.2	28.1	24.0	22.2	22.9	711.2
1957	15.1	12.2	14.3	14.3	134.7	342.3	227.1	56.1	41.0	33.0	26.9	24.1	955.7
1958	14.4	13.3	13.3	14.3	149.4	171.2	85.8	51.3	32.6	25.6	24.3	22.7	632.8
1959	13.3	13.1	14.4	24.3	56.7	203.7	124.6	43.7	26.6	32.0	24.1	21.9	601.8
1960	16.2	13.1	14.3	15.4	39.4	140.6	56.6	32.7	18.5	21.6	14.4	17.6	413.4
1961	13.1	14.3	12.3	5.7	53.3	144.0	46.6	27.7	45.0	41.6	32.5	26.6	475.3
1962	20.7	22.4	14.1	25.6	74.4	235.2	154.6	71.2	45.7	37.7	25.0	21.0	760.2
1963	13.4	14.4	13.0	20.4	94.4	203.4	114.4	45.6	41.1	24.6	23.4	17.9	715.1
1964	13.4	13.0	14.3	17.4	34.5	242.3	173.4	42.4	23.4	20.8	23.4	22.9	644.2
1965	20.4	13.3	13.4	23.1	36.1	245.0	205.1	78.0	48.5	34.1	25.6	21.3	801.2
1966	13.3	13.3	13.2	27.3	104.7	131.7	86.6	43.1	29.3	31.3	22.3	19.0	557.3
1967	14.3	13.2	21.0	13.3	73.1	323.1	276.2	83.3	41.2	47.7	29.5	19.3	943.3
1968	14.3	14.2	27.0	21.1	33.4	250.3	168.9	87.1	33.3	34.8	25.6	21.1	787.3
1969	14.4	13.3	15.4	23.8	96.1	172.4	160.1	50.6	25.9	20.7	23.4	18.4	657.2
1970	14.3	14.3	15.4	13.8	120.3	342.8	159.3	50.3	32.3	33.7	26.2	22.7	960.9
1971	22.3	21.3	17.4	27.7	94.3	282.8	187.4	79.4	63.8	45.8	31.8	25.8	969.7
1972	13.4	23.4	34.8	23.8	94.4	233.4	127.4	88.3	63.7	45.8	29.3	22.4	802.8
1973	17.3	13.4	13.2	34.2	113.8	207.6	150.4	47.4	34.2	33.3	24.9	21.2	724.8
1974	20.1	13.8	23.8	23.4	83.3	342.3	223.4	74.4	42.4	33.3	26.4	17.8	912.2
1975	13.1	11.8	13.2	36.3	118.1	271.3	405.4	86.6	33.4	0.0	.0	.0	1000.2
AVERAGE	17.3	13.7	13.2	23.4	90.4	217.1	136.8	58.7	38.4	31.6	24.2	19.4	714.8
STDEV	13.4	13.2	17.3	23.1	93.7	207.8	139.3	52.8	36.7	32.0	23.0	20.4	711.2

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STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 WITHOUT DEVELOPMENT LEVEL

77/11/30.

CLARKS FORK OF YELLOWSTONE AT EDGAR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	23.3	18.0	25.2	35.7	161.0	162.1	85.6	19.4	13.8	22.2	20.5	17.8	603.9
1940	13.7	17.3	19.7	25.3	143.0	185.5	40.2	3.4	17.7	34.3	26.1	26.0	553.3
1941	20.3	18.9	15.6	22.3	117.9	167.9	57.3	37.7	81.7	62.0	38.2	30.0	669.1
1942	23.9	18.2	23.2	42.1	96.9	192.1	137.6	21.0	22.3	30.6	32.3	30.3	670.0
1943	23.3	22.4	38.1	85.0	125.2	323.4	286.0	77.4	44.2	32.3	32.5	27.0	1112.9
1944	22.2	20.1	20.1	19.7	101.4	236.0	141.6	28.8	33.8	30.3	27.6	23.4	703.1
1945	23.3	18.9	22.7	20.7	72.3	240.6	220.6	63.3	34.3	35.3	33.3	27.0	812.3
1946	20.1	21.4	24.7	39.3	95.2	209.1	105.5	25.6	25.5	33.0	30.0	26.7	679.4
1947	20.1	21.2	32.8	24.3	168.6	197.4	146.9	42.6	24.0	35.2	32.2	27.6	772.2
1948	24.0	27.0	24.7	26.0	155.9	294.1	82.5	29.2	19.0	22.3	24.5	21.0	749.4
1949	17.1	15.8	27.7	39.3	159.5	235.9	89.0	17.5	26.3	33.5	29.6	29.6	718.7
1950	23.0	21.2	25.1	27.8	84.5	267.8	232.0	60.8	45.8	55.0	43.9	36.7	905.7
1951	24.0	25.5	30.7	33.8	161.1	200.1	221.5	91.8	41.8	45.5	37.2	26.1	947.3
1952	25.1	27.7	25.1	44.9	147.7	233.5	94.7	48.5	22.5	22.9	25.9	28.9	755.5
1953	24.5	19.5	20.5	25.0	50.1	244.8	134.9	37.5	19.3	18.6	27.8	27.8	654.4
1954	24.7	23.0	22.8	28.9	164.7	180.6	174.6	32.0	21.8	24.1	25.1	26.7	748.7
1955	25.7	22.7	25.0	27.4	65.2	194.2	85.7	20.5	12.8	18.3	26.6	28.6	552.8
1956	21.5	22.1	31.7	36.4	180.5	343.1	122.0	44.4	26.4	21.6	32.1	25.9	911.8
1957	21.1	27.1	25.3	24.4	151.4	347.1	170.2	36.8	37.7	36.6	36.1	30.5	944.6
1958	26.3	20.9	21.1	23.8	187.9	200.9	50.6	30.4	24.0	20.4	29.8	30.4	666.6
1959	23.9	21.3	24.5	30.0	55.4	347.5	145.7	35.2	23.6	41.3	35.4	27.9	809.8
1960	19.5	16.9	25.4	29.9	59.4	217.5	36.6	21.5	10.2	20.6	26.7	23.9	513.2
1961	22.5	19.0	15.5	6.9	84.5	239.4	35.6	10.5	55.3	49.8	38.9	26.3	603.3
1962	19.6	22.3	22.0	36.7	105.9	286.1	126.2	53.0	35.5	35.2	29.9	24.7	818.2
1963	20.8	32.0	22.5	25.5	138.3	286.2	97.1	16.7	36.4	24.6	28.4	23.8	752.8
1964	16.6	16.0	19.4	29.5	115.4	261.3	188.5	27.1	17.5	21.7	31.0	28.5	777.4
1965	27.3	25.5	19.5	34.9	92.8	340.2	208.8	74.1	48.5	45.2	34.0	30.2	979.2
1966	24.0	16.8	25.0	24.4	116.5	168.3	66.8	22.3	24.8	28.3	28.8	26.4	568.3
1967	26.1	21.2	21.6	20.7	110.2	377.5	241.2	48.6	28.4	42.3	36.1	28.1	1002.1
1968	25.3	25.9	25.7	21.5	44.3	280.4	129.6	80.5	46.5	37.6	31.0	25.4	772.5
1969	24.1	21.8	22.0	40.0	138.0	144.2	100.3	19.3	16.6	30.0	30.0	27.2	663.6
1970	25.7	22.3	21.5	20.5	156.9	307.1	125.1	24.7	34.0	37.8	30.7	27.5	816.9
1971	25.7	24.9	24.5	29.1	126.0	360.4	187.6	62.1	56.7	50.9	37.4	30.1	1014.1
1972	26.9	24.4	36.7	27.9	111.9	379.5	143.6	75.2	55.8	58.1	40.1	28.8	1014.8
1973	27.3	25.5	24.3	33.2	101.1	188.0	93.2	28.6	52.0	36.2	36.4	24.7	671.1
1974	30.2	21.9	24.7	36.7	94.0	394.8	169.4	61.4	36.4	29.8	33.4	27.1	985.9
1975	17.9	14.3	31.7	30.5	99.5	254.5	343.7	66.7	31.3	0.0	.1	.0	897.2
AVERAGE	23.6	22.0	24.6	31.7	116.2	257.9	138.9	40.4	32.7	35.0	30.7	26.6	778.2
MEDIAN	23.7	21.4	25.2	29.5	112.5	259.4	120.2	32.0	26.4	35.0	31.0	27.2	752.8

STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 77/11/30.
1985 WITHOUT DEVELOPMENT LEVEL

YELLOWSTONE RIVER AT BILLINGS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	135.1	102.9	215.1	233.5	851.9	948.2	443.6	171.1	125.8	170.8	151.4	152.5	3702.1
1940	85.7	135.9	156.5	170.2	710.1	1115.2	511.6	90.6	115.7	207.3	161.6	154.6	3341.9
1941	117.1	112.4	124.5	139.6	557.5	905.9	545.2	213.2	392.8	422.0	235.2	220.7	3862.3
1942	181.0	150.5	242.7	330.2	795.9	1458.8	867.0	256.3	203.8	232.2	228.7	206.3	5172.7
1943	161.0	223.1	330.2	522.2	790.7	2195.0	1008.9	483.5	312.7	249.4	228.9	191.6	7295.0
1944	163.2	134.9	178.2	146.9	517.7	1705.8	1004.8	255.1	246.9	233.0	209.0	145.3	4941.8
1945	139.9	125.7	163.4	155.8	480.5	1481.5	1206.7	393.4	257.3	262.9	240.9	169.0	5082.9
1946	199.3	187.5	197.0	330.0	636.9	1252.5	600.0	199.5	212.4	271.6	215.3	180.4	4462.4
1947	162.0	127.8	194.5	273.5	1043.4	1486.6	985.7	378.0	271.2	299.9	241.2	205.3	5666.9
1948	164.4	150.1	199.3	233.5	1036.7	2138.8	738.2	311.8	176.9	208.7	190.5	134.9	5689.8
1949	120.3	152.7	181.9	264.6	946.0	1525.8	546.7	197.2	206.4	244.6	207.0	124.5	4522.7
1950	89.0	115.6	145.8	207.1	531.0	1636.0	1294.9	456.8	291.3	331.9	293.7	249.9	5692.0
1951	174.0	198.3	251.5	270.8	896.3	1227.3	1077.9	570.4	305.2	317.1	269.0	184.7	5724.5
1952	163.9	157.9	186.9	408.3	1235.8	1606.3	713.0	350.1	208.5	192.2	180.1	186.9	5571.5
1953	172.6	140.6	149.6	165.6	550.9	1461.2	814.1	299.6	176.9	173.4	191.2	173.6	4249.3
1954	122.6	150.1	159.3	196.2	847.8	1076.3	965.5	295.8	179.3	189.5	188.6	159.8	4472.8
1955	135.0	114.4	145.0	235.8	455.5	1189.9	593.4	225.3	148.0	187.1	170.8	172.7	3770.7
1956	161.3	145.5	250.2	309.5	1212.4	1909.5	720.3	518.6	208.6	190.3	211.8	177.4	5815.0
1957	101.5	142.9	166.7	186.8	965.0	2240.6	1060.0	305.2	272.5	263.5	256.6	194.0	6155.1
1958	153.2	134.7	153.6	180.0	957.9	1136.3	443.8	213.1	163.8	169.3	199.0	177.2	4087.1
1959	141.8	124.5	178.6	215.1	503.2	1947.8	872.6	259.2	192.7	269.4	232.2	193.9	5130.5
1960	118.9	139.1	178.2	208.9	402.6	1169.8	331.0	188.6	128.8	164.9	182.7	151.6	3365.1
1961	136.2	135.1	124.8	84.7	424.4	1113.0	272.5	116.2	273.4	309.0	273.9	195.9	3457.1
1962	146.0	221.3	214.5	358.5	807.1	1727.1	696.2	399.8	291.3	248.2	217.3	187.1	5716.6
1963	153.5	224.5	163.2	182.4	779.6	1788.9	668.5	225.9	235.6	200.3	201.5	154.0	4961.7
1964	146.2	152.3	149.2	201.6	704.9	1714.7	1137.3	337.8	218.1	189.6	205.6	186.7	5344.0
1965	210.3	185.4	175.5	305.5	686.6	2083.8	1452.2	559.9	398.9	356.0	256.2	200.7	6869.0
1966	181.7	171.6	245.3	236.1	611.5	965.8	459.6	203.9	191.6	213.2	217.1	192.8	4048.4
1967	190.6	164.3	196.5	185.5	679.6	2441.9	1592.9	594.4	238.1	300.5	250.9	196.7	6831.9
1968	165.5	222.5	227.5	219.8	471.8	2029.1	1125.9	561.0	424.2	341.1	276.0	201.8	6265.8
1969	179.3	180.2	225.6	362.3	970.4	1522.1	935.4	276.7	193.8	252.5	226.3	190.1	5314.9
1970	156.9	160.0	167.6	182.9	1011.5	2171.1	1014.1	323.1	338.9	302.6	240.0	191.3	6260.0
1971	190.3	227.2	196.2	265.6	896.0	2215.1	1291.1	451.7	387.3	349.3	271.4	202.3	6959.5
1972	163.2	194.1	301.6	234.7	715.4	1954.5	865.6	471.5	389.5	391.1	286.5	201.9	6174.6
1973	195.0	171.7	202.0	290.5	855.2	1252.6	636.2	242.8	319.4	265.3	244.8	200.4	4873.9
1974	191.6	147.7	178.9	275.5	813.8	2434.3	1314.7	485.5	295.5	257.6	246.6	182.6	6624.3
1975	150.8	124.8	214.2	306.7	909.0	1951.7	2275.3	547.9	291.9	0.0	.7	.5	6772.6
AVERAGE	154.5	157.5	192.0	248.5	757.4	1615.0	903.8	325.1	251.0	249.4	219.7	176.5	5250.0
MEDIAN	161.0	150.1	185.7	235.5	779.6	1486.6	867.0	299.6	235.6	249.4	226.3	186.7	5172.7

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 WITHOUT PROJECT DEVELOPMENT LEVEL

77/11/29.

INFLOW BOYSEN RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	37.8	29.6	56.0	51.5	91.6	79.8	0.0	11.7	42.4	43.4	33.1	29.5	506.4
1940	28.7	26.9	35.6	25.2	48.2	28.5	.9	12.3	71.6	60.4	29.8	37.5	405.6
1941	35.7	27.1	43.8	63.1	184.2	222.0	55.3	114.2	71.6	124.9	65.6	51.5	1059.0
1942	44.2	41.7	58.6	87.3	188.0	252.5	135.9	23.2	41.3	61.4	56.8	45.4	1036.3
1943	50.7	49.6	70.0	131.7	193.7	371.9	310.9	86.2	56.2	61.7	53.8	43.0	1479.4
1944	33.9	37.5	45.6	69.9	227.0	475.0	199.7	18.3	25.9	62.7	44.1	38.0	1277.6
1945	42.9	37.5	55.2	58.8	130.5	283.8	255.8	74.5	76.2	95.7	48.9	40.0	1199.8
1946	45.0	43.9	57.4	73.6	90.6	223.3	93.0	20.4	62.2	91.7	54.4	43.1	898.6
1947	35.8	39.8	57.2	60.5	292.0	487.3	341.6	115.8	54.5	88.3	66.6	47.4	1686.8
1948	50.2	57.4	72.4	68.9	151.7	313.0	95.1	29.0	50.4	58.8	45.2	40.6	1032.7
1949	36.4	39.9	63.6	68.1	192.2	281.2	106.3	29.7	60.2	93.5	69.4	43.5	1084.0
1950	40.9	45.2	53.4	55.3	107.0	376.9	279.6	66.8	96.7	107.9	72.2	51.6	1353.5
1951	45.8	53.0	62.2	65.6	228.6	370.4	276.4	130.3	64.5	128.3	58.2	41.8	1525.1
1952	45.8	42.6	45.2	104.3	229.3	302.3	102.6	66.8	43.7	56.6	42.5	45.0	1126.7
1953	49.5	39.4	41.2	45.5	62.6	281.8	68.0	52.2	32.2	56.6	56.1	45.0	830.1
1954	49.4	45.3	46.9	40.6	201.1	137.7	146.5	48.9	40.2	57.4	45.1	35.5	894.6
1955	36.6	26.6	30.4	42.9	70.7	150.2	58.1	32.5	27.9	54.8	40.8	54.3	625.8
1956	47.6	33.0	59.8	54.3	225.7	410.3	132.8	60.8	40.4	53.3	47.0	39.7	1204.7
1957	34.6	34.0	42.0	53.7	188.8	519.8	330.5	88.8	69.5	111.3	65.8	55.5	1594.3
1958	46.9	50.1	51.3	48.8	302.6	144.9	36.7	52.7	34.1	50.3	46.9	44.1	909.4
1959	36.9	39.1	61.7	45.1	51.0	225.5	50.4	44.7	31.0	68.2	48.5	39.6	741.7
1960	34.2	27.4	51.6	50.9	31.6	71.1	11.2	18.1	26.1	63.8	48.6	33.9	468.5
1961	26.7	29.3	31.4	20.4	83.7	207.2	24.2	28.5	42.5	71.9	53.2	35.5	654.5
1962	39.0	93.3	42.6	87.8	135.2	371.1	162.8	55.1	51.4	64.5	46.4	37.9	1187.1
1963	28.9	40.4	45.1	44.9	91.7	436.1	117.8	54.9	81.5	62.6	45.1	35.9	1084.9
1964	35.8	31.4	38.9	54.2	119.0	325.0	212.0	38.1	30.5	57.2	36.9	35.4	1014.4
1965	43.7	37.8	40.6	80.3	105.0	529.5	390.0	122.4	79.6	103.7	68.6	52.2	1653.4
1966	29.8	37.6	55.9	49.5	78.1	74.2	40.2	44.1	55.3	70.6	47.0	39.5	621.8
1967	36.7	38.2	53.4	41.8	163.9	611.0	434.9	67.6	64.6	86.6	64.9	50.0	1713.6
1968	35.0	47.0	73.9	52.7	81.6	348.7	100.3	99.5	64.9	88.9	83.7	50.4	1126.6
1969	44.2	37.7	57.2	67.9	153.8	289.5	105.0	49.9	48.3	65.3	48.9	39.6	1007.3
1970	33.8	34.4	34.4	41.0	127.9	260.0	92.6	38.1	40.6	51.7	49.9	34.3	838.7
1971	34.4	84.6	36.3	49.6	186.7	641.9	233.7	79.6	85.7	96.1	63.1	54.4	1646.1
1972	50.1	75.5	76.2	57.3	192.9	460.2	146.7	92.8	64.5	79.0	56.3	40.5	1392.0
1973	38.0	32.4	52.2	117.0	255.0	177.5	144.8	66.8	188.0	102.9	77.1	49.2	1300.9
1974	38.4	39.8	70.5	83.1	162.8	422.9	169.8	75.1	61.9	67.3	50.1	34.8	1276.5
1975	34.9	31.2	55.3	43.4	119.0	281.4	413.1	91.4	60.3	.1	.1	.1	1130.3
AVERAGE	39.5	42.1	52.0	61.0	149.9	309.3	158.8	59.5	57.8	73.5	52.2	41.4	1096.9
MEDIAN	37.9	39.1	52.2	54.3	151.7	289.5	117.8	52.7	54.5	65.3	49.9	40.6	1084.0

STUDY NO. 1

YELLOWSTONE LEVEL H OPERATION STUDY
1985 WITHOUT PROJECT DEVELOPMENT LEVEL

77/11/29.

WIND RIVER AT HOYSEN

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	57.8	57.8	5.2	4.7	3.7	1.2	0.0	72.0	72.0	58.7	57.6	56.5	447.1
1940	55.2	55.2	0.0	0.0	0.0	0.0	0.0	72.0	72.0	42.9	41.9	40.9	380.0
1941	39.6	39.6	64.2	65.8	64.8	62.6	55.0	114.2	72.0	120.4	119.2	118.0	937.2
1942	114.5	114.5	84.5	84.1	83.2	81.2	74.1	72.0	72.0	82.9	81.7	80.7	1029.4
1943	79.3	79.3	135.0	171.7	170.9	169.0	162.6	86.2	72.0	93.3	92.1	90.9	1402.3
1944	89.5	89.5	135.0	150.9	150.1	148.4	141.9	72.0	72.0	71.2	70.0	69.0	1259.7
1945	67.6	67.6	105.8	105.4	104.5	102.8	96.4	74.5	76.2	106.5	105.3	104.1	1116.7
1946	102.7	102.7	50.8	50.4	49.5	47.3	40.2	72.0	72.0	90.0	88.9	87.8	854.3
1947	86.4	86.4	135.0	207.6	206.8	205.2	199.0	115.8	72.0	107.9	106.7	105.5	1634.1
1948	104.1	104.1	85.9	85.5	84.6	82.5	75.3	72.0	72.0	78.2	77.0	76.0	997.1
1949	74.6	74.6	90.4	89.9	89.0	86.9	79.7	72.0	72.0	97.4	96.2	95.1	1017.8
1950	93.7	93.7	119.8	119.4	118.5	116.8	110.9	72.0	96.7	117.2	116.0	114.8	1289.6
1951	113.4	113.4	135.0	145.3	144.5	142.8	136.6	130.3	72.0	115.8	114.5	113.4	1476.9
1952	111.9	111.9	97.9	97.5	96.6	94.8	87.3	72.0	72.0	89.0	87.8	86.7	1105.3
1953	85.4	85.4	45.6	45.2	44.3	42.2	35.2	72.0	72.0	85.9	84.8	83.7	781.7
1954	82.3	82.3	62.2	61.7	60.8	58.6	51.5	72.0	72.0	79.1	77.9	76.8	837.3
1955	75.4	75.4	15.7	15.3	14.3	12.1	4.8	72.0	72.0	77.6	76.5	75.4	586.6
1956	74.1	74.1	123.4	123.0	122.1	120.3	113.3	72.0	72.0	82.0	80.8	79.7	1136.7
1957	78.3	78.3	135.0	182.2	181.5	179.9	174.1	88.8	72.0	118.4	117.1	116.0	1521.7
1958	114.5	114.5	59.0	58.6	57.7	66.1	36.7	72.0	72.0	79.3	78.1	77.0	885.6
1959	75.7	75.7	34.4	34.0	33.0	30.8	23.5	72.0	72.0	79.6	78.5	77.4	686.6
1960	76.0	76.0	0.0	0.0	0.0	0.0	0.0	72.0	72.0	49.4	48.3	47.3	441.1
1961	46.0	46.0	25.1	24.6	23.6	21.4	14.0	72.0	72.0	80.7	79.6	78.5	583.5
1962	77.1	77.1	118.1	117.7	116.8	114.8	108.0	72.0	72.0	84.1	82.9	81.8	1122.6
1963	80.4	80.4	94.1	93.7	92.9	91.0	84.4	72.0	81.5	89.6	88.4	87.3	1035.8
1964	85.9	85.9	93.9	93.5	92.7	90.9	84.6	72.0	72.0	73.7	72.5	71.4	989.0
1965	70.1	70.1	135.0	187.9	187.1	185.6	180.2	122.4	79.6	112.8	111.5	110.4	1552.6
1966	108.9	108.9	.3	0.0	0.0	0.0	0.0	72.0	72.0	82.6	81.4	80.3	606.4
1967	78.9	78.9	135.0	225.7	15.0	328.3	321.6	72.0	72.0	105.3	104.0	102.9	1639.6
1968	101.5	101.5	75.6	75.1	74.2	72.2	65.4	99.5	72.0	114.0	112.8	111.7	1075.4
1969	110.2	110.2	75.2	74.8	73.9	71.9	64.8	72.0	72.0	84.5	83.3	82.2	975.1
1970	80.8	80.8	56.9	56.5	55.6	53.5	46.5	72.0	72.0	75.4	74.2	73.1	797.4
1971	71.8	71.8	135.0	199.8	199.0	197.4	191.1	79.6	85.7	114.9	113.7	112.5	1572.2
1972	111.1	111.1	134.6	134.1	133.3	131.5	124.7	92.8	72.0	100.6	99.3	98.2	1343.3
1973	96.8	96.8	91.4	91.0	90.2	88.0	80.6	72.0	188.0	114.6	113.4	112.2	1234.9
1974	110.8	110.8	122.6	122.2	121.4	119.6	113.0	75.1	72.0	93.3	92.1	90.9	1243.8
1975	89.5	89.5	125.8	125.4	124.6	123.0	117.7	91.4	72.0	46.5	45.3	44.2	1094.7
AVERAGE	85.8	85.8	84.9	95.2	88.7	95.7	89.0	80.3	76.7	89.1	87.9	86.8	1045.7
MEDIAN	80.8	80.8	90.4	89.9	84.6	86.9	79.7	72.0	72.0	85.9	84.8	83.7	1029.4

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 WITHOUT PROJECT DEVELOPMENT LEVEL

77/11/29.

GREYBULL RIVER AT BASIN

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	6.1	5.0	11.5	5.7	2.0	2.2	0.0	0.0	0.0	.2	.7	5.6	39.0
1940	3.9	4.4	5.4	2.9	14.7	4.6	1.2	0.0	1.1	3.9	6.5	7.1	55.7
1941	4.5	3.9	5.9	11.1	17.4	61.0	15.9	55.6	40.3	30.4	17.6	8.7	272.3
1942	4.6	6.4	10.2	17.6	43.6	58.7	12.3	2.2	3.8	6.3	8.1	6.0	179.8
1943	6.3	7.0	15.3	26.8	17.1	57.8	42.3	6.2	3.3	4.1	9.2	8.0	203.4
1944	6.3	6.3	7.8	13.3	45.3	81.7	29.7	2.3	1.0	4.3	7.6	6.2	211.8
1945	6.5	6.1	11.4	8.8	6.3	68.0	48.1	11.9	9.1	7.9	10.0	9.1	203.2
1946	8.2	7.0	10.9	12.7	3.2	16.6	6.5	2.1	13.5	14.4	11.1	6.9	113.1
1947	3.7	5.1	8.1	13.6	22.1	46.1	45.0	6.4	3.8	7.0	11.3	7.3	179.5
1948	6.2	6.0	12.4	18.9	14.0	41.3	15.2	3.2	3.6	5.8	8.3	7.2	142.1
1949	6.8	4.9	12.2	11.0	3.8	30.5	4.8	1.0	.8	4.8	7.8	4.7	92.3
1950	4.3	6.2	7.0	6.3	3.2	5.7	5.9	5.5	6.9	9.3	10.0	9.1	79.4
1951	5.8	5.2	6.7	7.5	5.2	31.1	46.6	12.4	4.4	11.2	9.0	6.4	151.5
1952	5.7	6.0	8.7	34.2	46.1	59.7	10.3	5.9	1.1	1.7	6.5	6.2	192.1
1953	7.1	5.4	7.8	4.8	2.1	25.5	.7	.8	.4	3.1	5.1	6.3	69.1
1954	5.1	5.4	5.5	7.6	2.7	4.4	1.7	0.0	.3	1.3	1.5	4.7	40.2
1955	4.2	4.4	5.1	6.4	.1	1.2	.2	0.0	.2	.6	4.4	6.3	33.1
1956	4.6	4.3	7.3	1.8	2.0	7.2	1.3	1.0	1.2	2.2	5.6	5.5	44.0
1957	5.0	5.1	6.0	3.9	29.9	172.0	57.5	3.5	3.6	4.9	10.3	8.6	310.3
1958	6.1	5.3	5.6	9.1	39.6	24.8	9.7	3.1	1.5	1.7	6.7	6.7	119.9
1959	5.6	5.4	7.4	6.8	3.4	5.3	2.0	.4	.5	4.3	5.5	5.5	52.1
1960	5.1	3.9	7.9	3.5	0.0	.2	0.0	0.0	.4	1.1	4.0	3.3	29.4
1961	3.1	3.8	7.1	.2	0.0	9.7	1.4	.4	9.0	6.9	9.4	5.4	56.4
1962	5.0	13.6	11.2	18.1	4.3	47.0	12.8	6.2	2.7	1.5	6.1	7.1	135.6
1963	3.1	8.5	11.4	5.4	7.9	154.1	7.6	.8	4.1	2.2	7.2	5.8	218.1
1964	6.4	5.4	7.0	7.9	13.7	64.8	46.9	1.9	1.3	1.2	3.4	2.7	162.6
1965	3.0	2.5	4.6	12.2	9.4	103.0	65.0	9.8	13.8	11.4	9.8	8.5	253.0
1966	7.1	5.4	6.3	2.6	0.0	.8	.4	.7	1.9	1.9	7.3	5.6	40.0
1967	4.2	4.1	7.3	2.8	5.5	114.4	58.7	3.1	3.2	3.1	8.6	5.8	222.8
1968	5.3	8.2	7.7	4.7	1.6	24.3	1.9	9.6	4.5	3.9	5.9	6.2	83.8
1969	6.3	5.8	7.0	10.9	3.0	25.6	10.1	1.0	2.2	4.2	7.6	6.3	90.0
1970	3.8	4.9	6.6	4.8	8.6	29.3	5.2	.7	2.3	3.3	7.3	6.4	83.2
1971	5.4	5.5	4.3	6.2	9.6	77.1	7.0	2.4	2.6	12.4	9.0	3.2	146.7
1972	4.3	7.5	11.5	6.5	3.2	39.7	2.0	4.5	1.7	5.0	8.4	6.1	100.4
1973	4.8	5.7	12.8	8.3	27.8	12.0	7.6	2.1	18.8	0.0	0.0	0.0	99.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGE	4.9	5.4	7.9	8.8	11.3	40.8	15.8	4.5	4.6	5.1	6.9	5.8	121.8
MEDIAN	5.1	5.4	7.3	6.8	5.2	29.3	7.0	2.1	2.3	3.9	7.3	6.2	100.4

STUDY NO. 1

YELLOWSTONE LEVEL H OPERATION STUDY
1985 WITHOUT PROJECT DEVELOPMENT LEVEL

77/11/29.

INFLOW BUFFALO BILL RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	14.3	10.9	27.6	53.4	188.9	231.9	142.8	48.3	21.4	27.4	31.2	19.8	837.9
1940	14.4	15.3	19.1	34.1	169.1	239.9	72.7	25.6	25.7	32.2	26.9	25.7	700.7
1941	18.1	16.4	17.9	24.0	161.2	254.3	119.8	112.5	92.6	63.5	35.5	27.3	948.1
1942	17.4	13.8	16.7	55.2	130.8	283.6	211.3	33.4	17.8	15.0	19.1	17.8	831.3
1943	14.4	17.4	27.7	145.2	173.9	418.4	382.8	95.9	34.1	22.3	24.9	18.8	1375.8
1944	15.5	12.9	13.4	22.9	135.4	267.8	182.4	30.8	18.8	17.8	14.5	16.7	748.8
1945	13.8	10.3	14.3	28.7	109.2	241.2	283.1	71.9	34.5	32.7	26.2	21.2	899.1
1946	15.7	14.6	22.3	84.2	119.2	278.3	142.9	33.8	28.0	24.7	20.7	17.8	802.2
1947	14.8	13.8	15.2	35.4	210.4	272.5	268.3	82.2	29.5	35.0	25.2	20.2	1021.7
1948	18.8	16.3	14.7	32.2	208.9	375.9	128.2	26.7	15.6	14.0	13.3	10.4	869.0
1949	5.9	10.7	8.5	64.2	185.8	322.2	124.1	19.5	17.1	23.8	24.0	13.2	821.0
1950	12.8	9.1	17.1	37.7	108.3	340.7	292.3	51.7	56.8	60.2	37.7	30.0	1046.4
1951	18.7	20.2	18.1	53.0	227.5	305.5	343.5	118.8	43.2	35.0	26.9	21.5	1231.9
1952	13.4	13.6	14.0	88.4	198.6	316.3	139.1	43.9	22.6	15.8	14.4	15.9	894.0
1953	15.2	13.2	18.7	38.8	78.1	323.7	187.3	37.4	21.9	16.4	19.1	15.1	782.7
1954	15.7	13.8	12.5	43.1	229.8	232.7	218.2	31.0	18.0	13.1	13.4	13.5	846.0
1955	9.2	9.4	11.1	21.4	100.1	248.7	128.0	31.1	15.0	15.4	18.3	21.1	626.8
1956	16.8	12.2	28.8	61.0	275.4	446.4	176.5	44.9	22.2	18.2	20.3	17.7	1139.4
1957	13.5	11.9	15.0	27.9	221.9	427.7	235.5	53.2	40.8	27.0	20.9	21.0	1116.3
1958	18.1	13.4	14.2	25.2	285.6	237.8	82.2	32.5	18.9	13.6	24.6	18.3	784.4
1959	17.3	13.5	16.1	35.0	88.2	408.4	152.6	37.0	22.4	31.8	24.0	18.8	863.1
1960	16.2	14.2	22.8	34.4	90.7	245.3	77.1	26.5	18.8	17.4	15.0	12.9	591.3
1961	10.4	9.9	13.1	14.0	139.1	299.6	66.7	19.7	54.1	51.9	34.9	19.7	733.3
1962	18.8	20.3	19.4	91.3	133.2	362.6	280.2	64.7	26.8	20.9	19.8	17.9	995.9
1963	15.9	20.5	17.0	30.2	192.2	407.6	166.5	31.7	30.8	15.7	21.7	20.2	970.0
1964	18.7	17.0	16.5	27.6	153.5	307.5	296.7	42.7	15.5	18.0	21.5	25.9	961.1
1965	21.4	16.7	19.7	68.8	157.3	462.3	349.9	93.4	54.1	44.6	30.9	25.3	1336.4
1966	21.9	18.0	24.8	35.7	161.9	206.1	105.6	34.3	33.2	21.7	25.1	20.2	708.4
1967	18.3	14.3	19.4	22.2	156.3	460.7	311.6	54.2	22.1	25.5	28.9	21.4	1154.9
1968	20.9	19.0	21.9	19.5	72.5	336.1	182.5	83.8	46.6	27.0	23.4	22.8	876.0
1969	21.5	18.2	21.2	64.3	206.9	223.8	134.8	34.1	23.2	22.8	26.2	19.7	816.3
1970	18.6	16.8	17.9	18.7	207.3	427.9	207.1	47.8	35.3	27.7	25.4	20.5	1071.1
1971	20.4	17.3	17.6	39.0	190.2	495.9	301.3	86.1	39.3	36.3	29.8	19.5	1292.9
1972	18.2	18.7	22.5	27.7	148.2	153.6	113.9	35.7	39.2	39.5	32.1	22.7	672.0
1973	22.1	18.5	35.8	32.1	141.4	418.1	169.2	79.1	53.8	22.0	31.8	23.4	1047.3
1974	20.4	17.1	21.2	63.8	172.1	552.2	259.0	60.0	25.1	22.4	27.0	20.5	1260.8
1975	20.0	16.3	19.8	23.3	95.4	270.7	426.1	71.0	30.7	0.0	0.0	0.0	973.3
AVERAGE	16.8	15.0	18.7	43.5	162.3	327.6	199.8	52.1	31.5	26.2	23.7	19.3	936.4
MEDIAN	16.8	14.3	17.9	35.0	161.2	307.5	176.5	42.7	25.7	22.8	24.6	19.8	876.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 WITHOUT PROJECT DEVELOPMENT LEVEL

77/11/29.

SHOSHONE RIVER AT BYRON

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	74.4	48.4	35.4	18.0	21.1	31.1	69.2	38.0	33.6	31.0	64.8	67.6	532.6
1940	35.6	53.0	26.9	18.0	6.5	16.6	39.2	38.0	33.6	21.9	64.8	67.6	421.6
1941	23.1	22.1	23.1	7.1	7.2	17.4	39.2	38.0	33.6	74.3	99.3	100.2	484.4
1942	98.2	50.7	24.5	18.0	19.8	29.9	117.8	38.0	33.6	21.9	64.8	67.6	584.5
1943	22.5	32.5	35.5	18.0	152.7	162.6	289.3	38.0	33.6	43.6	68.7	69.6	966.6
1944	67.6	50.6	23.1	9.9	1.1	11.2	88.9	38.0	33.6	21.9	64.8	67.6	478.1
1945	21.9	22.1	23.1	7.6	0.0	0.0	189.6	38.0	33.6	40.8	65.9	67.6	510.1
1946	64.1	52.3	30.1	18.0	25.8	35.8	49.3	38.0	33.6	25.3	64.8	67.6	584.6
1947	22.9	46.5	23.1	18.0	44.1	54.2	174.7	38.0	33.6	43.3	68.4	69.2	635.8
1948	67.2	54.0	23.5	18.0	89.5	99.7	39.2	38.0	33.6	21.9	64.8	67.6	616.8
1949	23.1	22.1	23.1	15.7	53.5	63.6	39.2	38.0	33.6	21.9	64.8	67.6	466.1
1950	23.1	22.1	23.1	14.7	20.0	30.2	198.9	38.0	33.6	54.1	79.2	80.1	616.9
1951	78.0	57.9	25.9	18.0	78.0	88.0	249.9	38.0	33.6	54.9	80.0	88.9	883.0
1952	78.9	51.3	23.1	18.0	85.0	95.0	45.5	38.0	33.6	22.3	64.8	67.6	622.8
1953	23.3	37.3	26.5	18.0	4.2	14.4	93.9	38.0	33.6	21.9	64.8	67.6	443.3
1954	23.8	35.7	23.1	18.0	36.0	46.0	116.5	38.0	33.6	21.9	64.8	67.6	524.8
1955	23.1	22.1	23.1	4.5	0.0	0.0	39.2	38.0	33.6	21.9	64.8	67.6	337.6
1956	24.4	22.1	31.6	18.0	176.4	186.5	83.0	38.0	33.6	24.5	64.8	67.6	770.3
1957	21.6	44.4	23.1	16.6	124.3	134.5	142.0	38.0	33.6	35.6	64.8	67.6	746.0
1958	49.4	51.1	23.1	13.1	61.2	71.2	39.2	36.0	33.6	21.9	64.8	67.6	534.0
1959	23.1	22.1	23.1	4.5	38.9	49.2	59.3	38.0	33.6	27.9	64.8	67.6	451.9
1960	26.5	43.7	38.7	18.0	0.0	0.0	39.2	38.0	33.6	21.9	64.8	67.6	391.9
1961	23.1	22.1	23.1	4.5	0.0	0.0	39.2	38.0	33.6	23.8	64.8	67.6	339.6
1962	26.9	45.6	27.2	18.0	78.5	88.6	106.7	38.0	33.6	31.8	64.8	67.6	627.2
1963	38.1	58.2	24.8	18.0	100.0	110.2	73.0	38.0	33.6	25.0	64.8	67.6	651.3
1964	26.8	45.9	24.3	16.5	30.0	40.2	203.2	38.0	33.6	26.6	64.8	67.6	617.4
1965	29.5	47.5	27.5	18.0	125.2	135.4	256.5	38.0	33.6	57.8	82.9	83.7	935.5
1966	81.7	51.6	36.7	18.0	0.0	0.0	39.2	38.0	33.6	21.9	64.8	67.6	452.9
1967	26.4	33.9	27.2	11.1	108.0	118.3	218.2	38.0	33.6	33.6	64.8	67.6	780.7
1968	43.5	56.1	30.3	8.4	3.8	14.0	89.1	38.0	33.6	46.5	71.6	72.5	507.5
1969	78.5	55.9	29.0	18.0	32.3	42.2	41.1	38.0	33.6	26.5	64.8	67.6	519.4
1970	26.7	50.2	25.7	7.6	117.1	127.3	113.6	38.0	33.6	34.6	64.8	67.6	706.9
1971	46.7	55.0	25.4	18.0	147.5	157.8	207.9	38.0	33.6	47.6	72.7	73.5	923.6
1972	71.5	36.4	37.3	18.0	0.0	0.0	39.2	33.0	33.6	33.5	64.8	67.6	439.8
1973	43.3	56.2	43.6	18.0	80.8	91.0	75.8	38.0	33.6	47.9	73.0	73.9	675.0
1974	71.9	54.8	29.0	18.0	179.0	189.3	165.7	38.0	33.6	34.1	64.8	67.6	945.6
1975	44.9	47.4	34.2	12.3	0.0	0.0	332.6	38.0	33.6	21.9	64.8	67.6	697.2
AVERAGE	42.9	42.7	27.6	14.8	55.3	63.6	114.7	38.0	33.6	32.7	67.9	70.2	603.9
MEDIAN	26.9	46.5	25.4	18.0	36.0	46.0	83.0	38.0	33.6	26.6	64.8	67.6	534.0

STUDY NO. 1

YELLOWSTONE LEVEL A OPERATION STUDY
1985 WITHOUT PROJECT DEVELOPMENT LEVEL

77/11/29.

INFLOW YELLOWTAIL RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	160.1	124.3	135.5	55.0	120.0	128.1	63.6	100.4	122.5	132.6	165.1	169.4	1488.6
1940	113.7	143.7	81.1	57.2	70.9	133.3	69.8	92.8	128.6	163.5	137.1	136.8	1328.4
1941	100.1	104.5	152.3	125.5	191.0	265.0	117.9	244.1	211.4	272.8	292.7	258.2	2335.4
1942	239.9	209.2	239.2	240.6	299.7	398.7	215.1	111.5	143.7	176.5	206.3	177.7	2658.1
1943	95.5	170.1	274.4	267.7	358.7	493.5	589.8	133.3	140.1	190.6	221.0	189.6	3124.5
1944	180.4	165.7	212.0	242.9	393.9	554.4	373.6	123.4	147.2	154.8	194.4	160.5	2903.2
1945	128.0	131.2	205.3	164.0	159.0	365.3	446.0	166.9	209.7	234.5	241.9	226.0	2677.7
1946	214.0	196.3	166.8	160.6	180.7	248.6	170.5	129.9	200.8	185.5	212.1	201.0	2268.8
1947	135.9	167.9	243.6	300.5	444.2	467.6	590.0	185.3	141.5	232.6	241.1	222.5	3372.6
1948	205.2	235.9	252.5	142.6	283.5	347.2	180.2	130.1	152.5	163.8	198.5	159.9	2491.7
1949	127.5	124.4	232.2	155.0	231.9	324.8	149.0	103.9	147.7	185.7	216.5	198.3	2200.8
1950	162.9	177.0	214.0	186.2	195.2	275.2	346.9	152.8	187.3	253.0	252.2	252.2	2657.0
1951	223.9	231.2	228.6	217.4	232.6	350.8	509.7	237.7	155.0	247.3	258.4	225.7	3111.2
1952	243.6	217.5	185.1	210.9	344.7	344.6	161.0	117.4	119.0	159.3	193.8	190.4	2487.2
1953	154.4	163.8	115.6	101.9	84.8	254.9	133.2	112.4	121.8	158.2	206.6	191.4	1799.0
1954	138.7	166.6	134.3	107.7	185.1	172.6	168.8	102.6	120.6	161.0	192.1	184.9	1835.0
1955	112.5	127.0	101.5	98.9	126.7	207.2	77.9	107.4	127.8	164.4	179.2	180.0	1610.7
1956	128.0	125.0	238.9	182.3	376.9	397.9	191.7	107.6	132.9	149.6	182.5	172.1	2385.5
1957	111.2	159.4	204.0	235.4	419.0	629.6	377.4	133.5	147.5	230.1	249.1	225.1	3121.3
1958	191.5	198.6	129.5	94.8	256.4	244.3	62.5	133.7	130.8	159.1	195.6	189.2	1984.0
1959	148.9	143.7	135.2	88.6	122.2	257.9	146.4	108.5	136.7	189.3	191.2	189.8	1850.2
1960	131.8	161.6	131.7	57.7	14.8	83.8	12.5	106.0	144.1	132.9	158.4	143.5	1278.7
1961	98.7	117.7	97.2	58.4	80.2	97.6	40.1	92.5	182.6	180.4	191.5	162.6	1395.4
1962	187.0	228.3	261.5	247.5	324.5	427.8	293.4	146.3	162.8	185.0	207.3	173.9	2763.3
1963	132.2	212.5	164.7	154.5	298.0	527.0	217.6	130.2	185.2	195.9	224.1	185.9	2631.9
1964	152.9	182.0	180.5	179.5	307.5	509.6	362.1	136.5	153.7	171.8	203.0	175.6	2714.7
1965	155.2	170.2	214.8	278.7	421.9	659.0	601.3	227.5	198.5	266.9	206.7	234.8	3637.4
1966	213.0	194.5	74.9	41.4	34.6	29.0	23.7	102.8	136.0	152.0	185.4	181.4	1370.8
1967	145.1	149.4	223.1	265.6	229.0	855.7	706.0	144.3	181.0	218.2	215.3	220.3	3553.1
1968	209.4	230.9	180.3	127.3	171.4	503.5	228.2	229.7	181.3	236.3	250.2	228.5	2777.1
1969	210.7	215.7	170.7	164.3	205.8	262.2	174.0	125.3	135.3	193.1	208.2	198.6	2276.9
1970	145.3	148.1	138.0	97.2	350.8	425.3	242.7	125.1	153.4	181.7	205.5	187.0	2440.0
1971	180.4	185.7	224.3	299.1	494.8	617.5	439.7	132.7	174.3	291.3	275.6	241.4	3556.7
1972	230.9	259.8	280.9	205.6	255.6	446.7	194.6	186.3	163.7	214.7	232.9	197.0	2868.8
1973	185.7	194.0	217.1	178.4	374.7	379.4	215.1	135.2	325.7	251.4	257.1	242.8	2958.9
1974	234.6	218.4	214.5	218.9	420.2	503.6	315.8	129.7	159.2	199.1	217.5	191.3	3024.8
1975	175.3	186.2	243.4	218.2	303.1	445.5	687.5	172.8	165.3	68.8	110.4	112.0	2888.6
AVERAGE	162.8	177.8	188.6	169.5	253.1	368.6	267.4	139.4	160.2	192.0	210.2	194.0	2481.8
MEDIAN	152.9	170.2	185.1	168.3	232.6	350.8	194.6	129.9	147.7	185.5	206.7	189.8	2491.7

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 WITHOUT PROJECT DEVELOPMENT LEVEL

77/11/29.

BIGHORN RIVER AT ST XAVIER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	173.1	172.8	173.1	127.9	113.7	113.5	112.6	124.2	131.9	164.2	166.6	170.4	1743.9
1940	125.1	125.0	133.3	137.1	67.3	120.2	62.7	81.2	122.8	164.5	138.3	137.8	1415.3
1941	100.8	105.0	138.0	141.2	126.4	118.0	116.7	184.6	188.9	194.4	193.6	192.7	1800.3
1942	288.5	288.3	288.5	189.3	194.6	229.5	253.2	170.1	173.7	178.8	177.8	176.8	2609.2
1943	239.1	238.9	239.1	243.7	251.6	299.4	627.9	181.9	185.4	190.6	189.6	188.6	3075.7
1944	245.1	244.9	245.1	265.0	274.0	327.0	411.7	163.0	166.5	171.7	170.6	169.6	2854.3
1945	213.9	213.7	213.9	128.2	112.2	122.7	484.1	222.8	226.3	231.5	230.4	229.4	2629.0
1946	252.1	251.9	252.1	127.6	111.1	110.7	124.1	192.9	196.5	201.6	200.6	199.5	2220.7
1947	241.5	241.3	241.5	271.4	280.7	334.6	628.1	211.6	215.0	220.2	219.2	218.2	3323.3
1948	290.2	290.0	290.2	151.7	155.0	181.2	218.3	167.9	171.4	176.5	175.5	174.4	2442.4
1949	220.5	220.2	220.4	128.7	121.4	140.3	187.0	177.4	180.9	186.1	185.2	184.2	2152.3
1950	244.4	244.1	244.4	127.4	110.4	110.2	368.3	226.5	230.1	235.3	234.3	233.3	2608.7
1951	286.3	286.0	286.3	146.4	149.5	174.5	547.8	231.8	235.2	240.3	239.3	238.2	3061.5
1952	274.5	274.2	274.5	177.7	182.3	214.4	199.1	163.0	166.5	171.6	170.6	169.6	2438.1
1953	203.7	203.4	203.7	127.9	114.1	113.3	123.3	127.6	131.5	152.9	144.4	120.6	1766.3
1954	202.4	202.1	202.3	128.0	111.9	111.5	102.8	138.3	142.2	150.5	145.1	144.1	1781.1
1955	172.8	172.5	172.8	127.9	113.2	112.5	106.6	116.9	123.8	153.6	145.3	121.6	1639.7
1956	199.4	199.2	199.4	194.8	200.3	236.6	229.8	155.9	159.4	164.6	163.6	162.5	2265.6
1957	217.1	217.0	217.3	292.8	303.3	363.0	415.5	204.8	207.6	212.8	211.9	210.9	3073.4
1958	231.6	231.4	231.6	129.3	112.2	110.6	101.2	152.4	156.1	161.4	160.5	159.5	1937.8
1959	199.0	198.7	199.0	128.5	114.2	112.7	136.5	137.9	141.9	151.4	144.3	143.3	1807.2
1960	200.8	200.5	200.8	126.9	114.8	116.1	108.4	94.4	138.3	133.9	159.6	144.5	1739.0
1961	97.5	118.1	97.9	56.9	76.6	89.3	28.1	80.9	143.1	172.3	193.0	163.6	1317.4
1962	134.0	132.2	133.9	182.9	187.8	221.5	331.4	182.0	185.5	190.6	189.6	188.5	2260.1
1963	229.5	229.3	229.5	201.5	207.4	245.8	255.7	191.6	195.2	200.3	199.3	198.3	2583.5
1964	230.9	230.6	230.9	206.7	212.8	252.3	400.2	175.1	178.6	183.7	182.7	181.6	2665.9
1965	239.8	239.5	239.8	315.5	327.1	392.0	639.4	233.9	237.3	242.4	241.3	240.2	3588.2
1966	219.9	219.7	219.9	127.0	114.5	116.1	70.7	91.2	136.2	153.1	186.7	182.4	1831.2
1967	134.3	133.4	136.9	250.8	259.2	310.2	744.1	202.8	206.3	211.5	210.5	209.4	3009.4
1968	266.0	265.7	266.0	148.3	151.5	177.7	266.3	232.2	235.6	240.7	239.6	238.6	2728.2
1969	261.1	260.9	261.1	127.7	110.7	110.3	174.5	179.1	182.6	187.8	186.8	185.8	2228.5
1970	216.2	215.9	216.2	169.7	173.9	204.7	280.7	177.5	181.1	186.2	185.2	184.2	2391.4
1971	255.9	255.6	255.9	331.1	343.4	411.7	477.7	230.0	233.6	238.9	238.0	237.0	3508.9
1972	316.3	316.0	316.3	180.1	184.8	217.9	232.7	205.9	209.4	214.5	213.4	212.4	2819.7
1973	258.7	258.4	258.7	187.5	192.6	227.2	253.2	249.4	253.1	258.2	257.1	256.1	2910.2
1974	282.3	282.0	282.2	250.4	258.8	308.2	353.9	186.3	189.9	195.1	194.0	193.0	2976.1
1975	260.7	260.5	260.7	197.7	203.4	240.5	725.6	132.9	136.2	143.9	138.9	137.0	2838.0
AVERAGE	222.3	222.7	223.6	177.1	174.0	199.9	294.6	172.4	180.8	189.9	189.8	186.4	2433.6
MEDIAN	229.5	229.3	229.5	148.3	151.5	177.7	232.7	177.5	181.1	186.2	186.8	184.2	2438.1

STUDY NO. 1 YELLOWSTONE LEVEL 3 OPERATION STUDY 77/11/30.
1985 WITHOUT DEVELOPMENT LEVEL

YELLOWSTONE RIVER AT MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1931	7.5	7.7	59.7	17.5	0.0	56.0	0.0	0.0	0.0	14.2	8.0	9.0	165.1
1932	7.1	7.1	10.7	7.0	1.2	18.6	1.5	0.0	0.0	20.4	6.9	6.9	81.5
1933	7.1	7.1	7.7	6.4	12.0	45.7	0.0	0.0	14.7	53.0	35.6	19.8	181.2
1934	12.2	7.5	69.2	66.1	35.4	95.0	5.2	0.0	4.4	29.4	31.8	19.8	291.4
1935	11.4	15.9	45.5	64.5	45.4	105.5	5.2	0.0	4.4	18.4	30.3	17.6	373.5
1936	10.4	7.9	54.0	68.5	74.4	220.0	99.2	0.0	0.0	16.8	35.5	18.8	549.6
1937	12.2	9.9	64.5	29.5	19.4	124.6	45.2	0.0	6.4	40.4	51.3	16.3	348.8
1938	18.4	14.4	51.8	31.2	54.6	103.9	29.7	.9	17.8	41.5	34.5	21.9	394.6
1939	24.7	14.2	40.5	36.8	79.7	75.5	82.4	0.0	4.6	18.5	20.4	14.4	450.7
1940	14.8	15.7	45.5	42.5	61.7	59.1	61.7	2.1	.8	19.9	55.7	11.0	391.4
1941	10.0	7.1	64.5	29.7	42.7	53.6	0.0	0.0	0.0	11.7	27.5	26.3	295.9
1950	13.7	7.5	60.9	25.7	25.4	24.0	8.5	0.0	9.8	22.5	25.0	13.5	197.9
1951	15.1	12.2	15.5	15.7	22.1	24.5	17.5	7.1	24.0	21.6	32.5	12.0	213.4
1952	9.5	9.2	50.0	66.4	56.5	51.5	4.6	0.0	2.2	22.0	14.0	13.0	300.8
1953	11.4	9.9	12.7	5.0	19.0	94.2	0.0	0.0	0.0	16.9	24.2	12.5	208.4
1954	11.2	14.2	13.4	13.0	9.0	7.2	0.0	0.0	0.0	6.1	13.4	13.0	100.5
1955	9.7	5.6	15.5	29.5	44.2	65.9	14.5	0.0	0.0	3.8	8.5	9.7	201.5
1956	10.1	8.9	29.1	52.5	31.1	52.2	0.0	0.0	0.0	6.0	16.2	14.1	222.0
1957	8.4	7.5	14.1	21.4	22.1	109.1	24.9	0.0	12.6	16.7	10.5	10.4	256.0
1958	10.5	9.2	15.6	11.7	29.7	27.2	21.8	0.0	0.0	14.7	16.0	15.2	164.6
1959	12.9	19.4	90.5	31.5	20.2	13.1	0.0	4.1	6.6	8.5	10.8	15.2	221.2
1960	12.0	19.7	49.5	19.4	0.0	0.0	0.0	0.0	0.0	1.9	6.2	4.7	104.2
1961	5.1	5.1	5.4	.4	0.0	0.0	0.0	0.0	0.0	6.2	5.4	6.5	35.4
1962	9.7	15.0	54.5	55.5	42.1	117.5	12.7	0.0	6.4	15.9	13.0	10.9	314.6
1963	8.5	53.6	67.9	15.4	79.3	154.5	10.4	0.0	6.7	2.9	5.0	4.8	362.5
1964	9.1	10.5	11.6	17.0	84.5	140.5	46.3	7.5	12.0	14.1	12.5	10.9	330.5
1965	14.0	20.5	58.7	100.4	55.5	72.9	54.5	2.5	14.5	36.6	20.5	11.9	424.5
1966	9.2	7.5	15.1	7.1	5.5	5.5	0.0	0.0	1.4	2.7	6.0	6.6	67.4
1967	9.9	12.9	13.5	20.2	32.1	201.4	57.6	5.0	14.1	14.5	19.9	14.8	419.5
1968	17.5	30.8	47.5	26.5	25.4	136.1	31.5	26.9	31.0	35.6	19.0	12.4	458.7
1969	12.7	11.5	92.7	52.2	61.5	42.0	46.6	1.6	6.7	12.9	8.6	15.8	375.4
1970	15.5	14.5	24.7	55.0	58.1	155.5	21.9	.5	8.2	16.9	17.2	12.8	407.3
1971	11.7	99.5	109.4	51.2	66.0	91.5	5.3	0.0	9.1	45.1	21.6	12.4	530.6
1972	10.9	11.2	94.4	35.4	42.5	70.4	15.2	7.2	11.3	25.4	20.5	10.5	384.6
1973	14.5	15.5	15.9	16.4	79.5	110.7	17.4	4.9	19.7	29.2	23.9	10.1	360.5
1974	25.9	19.5	15.5	20.5	42.5	70.9	14.5	5.5	5.1	14.4	18.2	19.8	275.2
1975	30.7	9.7	59.7	49.8	105.5	157.8	129.2	37.2	12.4	.1	0.0	0.0	591.8
AVERAGE	12.2	15.1	37.2	31.0	39.4	81.7	22.1	5.0	7.2	16.3	18.8	12.9	298.3
STDEV	10.7	18.4	25.2	22.1	34.5	72.9	12.7	0.0	5.1	10.9	10.2	12.5	295.9

ACCOMPLISHED FROM BEST AVAILABLE COPY

STUDY NO. 1

YELLOWSTONE LEVEL a OPERATION STUDY
1985 WITHOUT DEVELOPMENT LEVEL

77/11/30.

YELLOWSTONE RIVER AT MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	360.6	255.6	459.0	402.9	809.0	1266.6	544.7	254.5	213.9	386.6	324.5	298.5	5576.4
1940	197.5	252.8	329.0	555.0	685.6	1312.6	931.4	117.5	178.3	440.7	299.4	290.6	4788.3
1941	224.5	234.5	327.7	337.5	678.4	1096.1	423.7	365.4	739.8	746.9	560.8	475.1	6215.2
1942	472.2	465.5	632.9	580.6	1043.6	1845.6	1145.6	415.6	359.8	470.0	446.7	397.7	8296.1
1943	400.6	621.5	558.6	895.9	1036.7	2619.6	2277.7	713.6	511.1	490.8	481.8	421.0	11529.0
1944	416.3	576.7	645.6	497.6	868.4	2701.9	1673.3	465.6	429.6	463.1	445.2	328.4	9307.8
1945	410.7	590.8	558.4	536.4	567.9	1770.9	1778.0	609.1	478.3	584.6	517.2	390.7	8393.1
1946	490.1	455.1	550.5	474.6	743.3	1496.1	731.6	359.7	473.6	561.3	483.1	389.0	7206.3
1947	330.3	329.0	598.1	668.3	1561.0	1622.7	1625.2	584.4	472.4	590.8	524.9	459.5	9344.8
1948	463.2	482.2	655.1	506.8	1112.3	2514.8	1172.5	464.5	387.4	439.9	450.3	282.7	8814.8
1949	285.8	541.2	629.0	502.6	1016.9	1561.4	754.7	320.8	377.2	466.8	452.8	506.3	7017.2
1950	312.5	571.7	699.1	550.6	644.6	1756.1	1713.0	699.7	530.1	658.9	560.8	500.8	8998.5
1951	461.1	471.0	686.5	504.9	977.7	1528.0	1608.3	853.7	605.4	621.9	567.0	457.9	9347.3
1952	452.9	462.4	666.7	714.8	1441.1	1844.0	943.8	500.7	379.3	423.5	391.7	339.5	8560.0
1953	412.3	365.7	420.5	325.4	469.2	1765.5	902.1	395.5	278.5	362.6	381.9	326.6	6409.7
1954	329.2	410.8	382.5	350.0	924.6	1113.8	1008.9	405.9	283.4	373.5	369.2	326.7	6278.6
1955	307.0	319.6	318.8	514.4	655.1	1345.5	886.3	279.2	226.0	369.1	320.2	338.2	5677.5
1956	393.0	381.1	615.4	576.9	1503.8	2276.0	899.5	425.8	361.2	389.8	446.5	354.7	8423.8
1957	328.3	466.3	473.0	573.5	1242.9	2780.8	1575.6	473.0	521.7	515.3	504.1	434.3	9789.9
1958	419.9	407.1	462.1	545.0	1006.5	1409.2	622.4	317.6	294.2	374.9	385.1	352.0	6397.1
1959	355.8	349.0	766.2	395.4	594.5	1649.9	944.3	333.0	317.7	461.7	406.9	344.5	7224.3
1960	328.5	373.2	546.7	379.4	464.1	1176.1	334.0	222.5	232.5	328.9	373.7	284.8	5044.5
1961	274.5	286.0	262.4	142.4	363.1	1179.0	211.7	112.8	411.0	537.7	517.1	334.8	4639.9
1962	400.9	434.2	465.0	572.7	1006.7	2086.2	1313.1	541.7	489.1	510.3	443.4	398.6	8562.0
1963	389.2	561.9	480.9	425.0	1038.6	2161.7	915.4	341.0	438.3	407.0	431.0	341.7	7930.8
1964	405.7	416.9	590.6	484.6	972.2	2177.3	1692.3	498.8	438.1	417.4	429.5	388.4	8713.9
1965	513.9	494.2	538.6	876.9	1083.7	2421.5	2155.5	794.0	703.0	679.8	443.0	424.0	11123.9
1966	371.6	372.1	544.9	369.6	715.0	1036.9	449.5	216.4	240.1	343.5	396.7	402.5	5457.5
1967	344.0	339.5	354.2	455.0	851.8	2461.2	2546.6	634.4	467.3	537.2	517.6	499.8	10000.0
1968	630.5	675.6	669.6	450.7	669.5	2387.8	1455.3	727.5	692.3	633.6	553.2	446.0	9989.5
1969	524.0	482.6	635.5	563.4	1090.5	1380.6	1286.8	500.6	395.3	477.3	444.3	474.0	8454.8
1970	505.4	498.2	429.6	363.5	1250.7	2400.8	1562.0	490.2	469.9	522.6	489.0	455.3	9417.3
1971	538.4	960.8	824.9	867.5	1262.7	2450.7	1625.9	658.9	596.3	741.4	547.6	508.6	11656.8
1972	502.5	548.5	1107.3	662.8	1013.2	2085.7	1101.1	620.7	575.2	670.9	638.1	402.9	9927.0
1973	542.5	548.6	548.9	545.4	1191.5	1603.1	856.6	491.7	570.8	610.6	687.2	530.8	8725.8
1974	531.0	516.1	567.5	662.7	887.4	2621.5	1605.6	642.2	519.3	534.9	593.7	475.0	10359.4
1975	559.7	494.5	705.9	624.6	1373.5	2160.7	2747.9	862.7	472.6	0.0	0.0	0.0	9996.7
AVERAGE	406.1	434.5	569.5	509.7	924.8	1678.8	1227.6	478.1	433.7	490.4	456.1	384.8	8199.9
MEDIAN	400.6	407.1	546.9	497.6	972.2	1822.7	1101.1	464.5	438.1	477.3	446.7	394.5	8454.8

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 WITHOUT DEVELOPMENT LEVEL

///11/80.

MINIMUM MONTHLY FLOWS AT ARVADA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	7.1	[illegible]	[illegible]	9.5	10.4	15.7	0.0	0.0	0.0	8.1	4.1	6.1	93.7
1940	5.0	7.0	15.0	13.6	8.4	15.7	0.0	0.0	0.0	[illegible]	3.6	4.9	103.2
1941	4.3	[illegible]	[illegible]	[illegible]	[illegible]	17.2	42.3	46.8	10.3	16.1	12.9	10.7	316.0
1942	4.2	3.8	18.7	22.9	39.5	10.7	0.0	2.0	0.0	5.6	7.1	4.7	125.2
1943	3.4	7.3	57.3	40.4	32.8	30.6	3.3	0.0	0.0	2.4	4.7	3.4	188.9
1944	1.9	[illegible]	7.3	32.2	92.0	68.9	10.6	0.0	0.0	5.7	6.7	6.0	257.7
1945	3.3	7.3	30.2	37.2	30.3	57.4	17.2	4.6	3.4	8.7	10.0	5.2	217.2
1946	5.3	10.9	17.2	22.3	22.0	20.9	14.4	0.0	0.1	8.1	9.0	6.7	154.0
1947	4.7	[illegible]	39.1	17.6	19.2	33.9	12.9	0.0	0.0	4.5	8.1	5.7	236.4
1948	4.2	11.4	30.7	12.7	23.3	79.4	10.6	0.0	0.0	7.2	7.1	4.3	210.3
1949	2.3	6.7	51.9	17.3	25.6	32.7	.0	0.0	0.0	4.8	4.8	.5	144.4
1950	.9	1.9	11.8	20.4	49.9	12.3	0.0	0.0	0.0	3.4	6.0	1.5	107.0
1951	3.0	3.3	12.3	7.7	11.4	0.0	0.0	0.0	14.6	6.4	5.7	3.7	88.8
1952	1.3	4.3	13.9	20.2	36.4	8.3	3.2	0.0	0.0	.8	3.3	2.0	123.3
1953	4.0	3.1	15.2	5.3	3.4	30.3	0.0	7.1	0.0	0.0	2.3	2.3	79.1
1954	2.3	11.4	12.1	14.0	9.4	0.0	0.0	1.9	0.0	0.0	2.9	1.2	54.5
1955	1.4	2.1	42.1	25.7	25.9	37.0	1.7	5.3	0.0	.8	1.8	11.6	156.6
1956	3.0	3.7	33.4	13.2	15.1	4.2	0.0	0.0	0.0	0.0	1.6	3.3	86.8
1957	2.7	.0	11.9	12.0	25.4	39.0	7.2	0.0	0.0	3.3	7.3	5.9	135.6
1958	4.0	5.3	10.7	14.2	25.7	15.1	20.9	0.0	0.0	.5	4.3	3.2	101.6
1959	2.9	2.4	20.0	9.0	25.3	18.3	4.8	0.0	0.0	1.5	1.7	3.3	87.6
1960	2.0	3.9	33.2	12.7	1.7	0.0	0.0	0.0	0.0	0.0	1.1	.9	57.6
1961	1.4	1.3	5.9	4.0	4.3	0.0	0.0	0.0	0.0	0.9	5.3	1.5	39.5
1962	1.1	24.9	13.7	25.1	119.1	191.8	42.1	6.3	8.0	22.7	9.6	7.9	472.0
1963	3.9	15.0	12.3	12.5	29.0	43.6	3.4	0.0	7.3	3.3	5.9	4.0	147.1
1964	4.5	5.2	11.5	25.2	34.0	98.0	15.1	0.0	0.0	1.9	5.8	5.1	203.3
1965	7.9	12.2	27.0	37.3	42.2	80.2	21.8	3.2	1.9	7.9	7.1	4.3	236.0
1966	3.3	4.4	14.3	14.4	15.0	2.0	0.0	0.0	3.6	2.2	5.4	2.9	71.6
1967	3.7	3.3	11.3	9.3	25.4	159.0	41.0	0.0	4.0	7.7	8.4	3.9	276.9
1968	3.7	3.4	20.3	12.3	40.0	122.7	14.0	3.9	7.9	9.7	7.9	6.2	257.4
1969	1.8	3.9	17.7	13.9	13.7	11.0	3.3	0.0	0.0	2.5	5.8	3.7	85.6
1970	4.9	4.0	13.3	11.3	33.8	43.4	5.4	0.0	0.0	4.4	7.1	5.7	170.7
1971	3.3	1.7	33.3	15.9	49.1	30.4	0.0	0.0	0.0	6.3	8.3	5.4	181.7
1972	4.3	31.3	37.9	19.8	44.7	33.3	0.0	3.8	2.3	8.9	8.1	3.9	199.3
1973	4.3	3.4	19.3	38.4	78.9	25.2	19.1	0.0	16.0	12.8	17.4	17.1	249.0
1974	14.9	10.8	15.9	33.3	17.9	4.0	0.0	0.0	0.0	5.2	7.6	5.1	119.1
1975	5.9	4.0	19.8	29.1	37.3	97.8	22.9	0.0	0.0	0.0	0.0	0.0	201.2
AVERAGE	3.3	7.1	22.1	20.3	33.3	42.2	9.4	2.3	2.3	5.9	6.1	4.7	162.6
MEDIAN	4.0	5.0	15.9	15.6	25.8	28.9	3.3	0.0	0.0	5.2	5.9	4.3	144.4

STUDY NO. 1

TELLURSTONE LEVEL & OPERATION STUDY
1985 WITHOUT DEVELOPMENT LEVEL

77/11/30.

POWDER RIVER AT LOCATE

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	9.4	5.5	123.1	23.0	26.5	50.0	5.7	0.0	0.0	2.6	3.7	5.2	253.6
1940	1.7	.8	27.2	25.1	12.4	34.1	22.6	8.2	.3	56.4	7.8	12.5	207.0
1941	7.3	4.8	21.5	82.6	181.4	65.3	31.7	58.5	48.3	39.1	21.6	25.3	552.9
1942	5.8	10.3	60.1	44.3	73.2	69.5	3.1	6.4	0.0	9.4	8.1	9.6	299.7
1943	11.2	212.0	151.9	69.1	50.0	142.1	30.8	4.5	4.3	3.5	8.5	6.0	694.4
1944	3.6	2.3	231.3	129.7	176.5	405.3	81.7	8.4	3.2	6.3	10.1	8.0	1125.3
1945	5.9	14.7	60.3	36.5	39.3	142.8	45.9	17.8	11.1	15.5	13.7	9.4	414.9
1946	16.0	22.0	59.3	41.0	61.9	93.6	49.6	9.4	20.7	42.2	19.1	19.9	454.6
1947	13.1	57.0	197.9	66.6	128.5	96.5	42.8	1.3	0.0	7.3	9.7	9.7	612.3
1948	6.0	101.0	296.2	34.3	52.2	122.0	67.7	13.1	.1	12.5	16.2	5.0	636.8
1949	4.0	2.8	228.2	44.7	53.6	75.5	5.1	0.0	0.0	8.7	13.1	3.4	439.1
1950	0.0	0.0	.4	86.5	75.9	49.1	10.2	2.1	0.0	10.7	7.2	7.6	232.0
1951	4.7	5.4	25.5	22.0	16.5	8.2	7.5	15.7	32.4	16.4	19.3	23.2	196.6
1952	4.6	11.2	102.9	107.6	85.9	40.2	15.5	2.3	1.1	3.0	5.9	5.8	385.9
1953	7.1	10.2	31.3	15.8	17.8	104.6	0.0	20.2	0.0	4.8	4.2	7.4	223.3
1954	6.9	14.9	24.3	12.7	18.0	.2	0.0	10.6	9.6	.6	3.6	4.9	110.3
1955	3.0	2.9	32.4	85.2	42.1	55.6	18.4	4.1	0.0	.5	2.4	4.3	251.5
1956	6.9	4.2	73.0	26.8	35.7	36.5	0.0	2.9	0.0	.7	3.8	6.7	197.1
1957	4.9	3.5	22.7	17.3	15.0	129.8	26.5	.1	.8	7.5	11.2	7.3	246.5
1958	9.2	9.5	17.3	21.3	39.1	47.6	45.5	8.6	0.0	5.7	4.9	8.4	215.8
1959	6.1	6.9	161.1	25.5	27.0	30.5	10.3	0.0	0.0	3.9	6.4	9.8	286.6
1960	6.1	7.9	125.0	25.8	0.0	0.0	0.0	0.0	0.0	.3	.6	.3	165.8
1961	.3	1.6	15.3	3.4	0.0	.2	0.0	0.0	2.4	6.8	5.1	2.6	37.8
1962	1.7	75.9	50.9	36.8	129.8	258.0	112.1	17.8	7.9	28.3	16.2	9.4	746.0
1963	7.2	62.4	83.2	24.3	55.6	186.9	39.5	.7	9.3	7.3	11.2	5.3	492.8
1964	6.9	6.1	27.7	31.5	36.7	183.9	58.1	5.7	1.4	2.3	4.5	5.3	368.0
1965	9.9	14.5	14.2	179.6	60.2	103.4	36.8	7.7	5.5	15.9	13.0	7.3	466.0
1966	7.3	6.8	29.2	23.6	16.3	0.0	.6	0.0	0.0	4.2	4.7	5.1	98.1
1967	5.4	9.3	31.2	21.2	65.0	291.3	97.3	2.9	19.5	15.2	16.0	6.5	581.2
1968	6.0	25.1	119.8	29.8	46.2	213.1	38.5	32.4	26.1	17.5	18.5	7.7	576.5
1969	10.8	8.8	135.2	72.9	56.1	23.8	39.8	2.8	0.0	3.4	11.1	5.4	369.8
1970	6.7	13.8	54.1	31.6	106.0	126.5	17.1	0.0	0.0	5.9	13.0	6.7	381.0
1971	4.9	112.0	176.8	69.0	87.4	150.3	11.8	0.0	.2	53.8	21.8	5.7	673.2
1972	7.4	77.7	283.0	41.3	57.0	85.8	19.9	15.0	14.5	20.1	21.4	6.3	649.4
1973	10.9	12.9	56.5	43.1	113.9	98.9	19.2	9.8	35.0	20.7	18.5	8.0	423.5
1974	27.7	31.7	44.8	54.1	55.0	35.2	7.8	4.4	7.2	15.7	18.8	12.0	314.1
1975	10.5	12.4	59.8	50.1	117.8	166.3	88.8	6.4	1.2	.3	.3	.2	512.8
AVERAGE	7.5	20.2	83.9	46.5	59.2	102.0	29.8	8.0	7.1	12.8	10.7	8.0	401.4
MEDIAN	6.1	9.9	50.9	34.3	52.2	75.5	19.2	4.1	.8	7.3	10.1	6.7	369.8

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1995 ULTIMATE DEVELOPMENT LEVEL

77/11/30.

YELLOWSTONE RIVER AT SIDNEY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1931	370.0	284.9	729.1	411.1	827.9	1294.9	478.6	189.5	158.7	389.2	346.7	308.5	5979.5
1940	350.5	281.4	552.6	495.5	842.9	1376.0	268.0	78.6	124.0	587.9	294.9	383.0	4865.2
1941	414.0	338.9	385.5	402.6	729.1	1193.9	484.2	413.5	853.0	340.6	595.0	525.8	6800.5
1942	467.4	399.7	592.2	575.9	1914.4	1982.5	1088.0	382.5	313.9	487.5	580.3	452.5	8492.5
1943	413.7	377.5	1251.0	1072.4	1827.4	2703.0	2481.6	721.5	489.2	484.5	444.8	439.5	12995.1
1944	419.8	405.1	1038.3	798.0	936.5	3210.5	1740.7	483.7	375.7	472.0	459.4	529.5	10628.9
1945	428.2	404.9	755.0	595.1	580.0	1756.9	1563.0	576.2	453.2	597.0	522.1	564.8	8608.1
1946	519.4	435.4	595.4	459.5	884.9	1479.0	771.0	286.9	476.6	647.2	548.0	446.9	7457.1
1947	574.9	420.7	1184.5	802.5	1421.6	1796.6	1014.0	524.9	418.1	603.8	559.2	477.7	10208.4
1948	485.8	459.1	740.6	607.1	954.3	2731.2	1496.5	429.2	250.6	442.3	470.6	269.2	9149.2
1949	505.0	554.0	597.2	591.0	685.4	1367.7	716.4	255.3	302.3	453.4	458.2	306.3	6867.1
1950	497.8	598.9	705.9	670.9	815.5	1761.5	1385.5	627.6	486.9	626.1	511.2	501.2	8988.3
1951	474.9	471.2	657.2	575.7	787.9	1430.9	1477.6	749.0	600.3	609.0	590.6	385.9	8940.6
1952	484.8	558.2	736.7	1591.9	1378.6	1865.0	868.6	424.2	313.9	388.1	585.2	539.5	9157.8
1953	485.7	584.3	451.7	313.7	485.6	1698.7	838.3	345.9	208.5	341.8	379.7	307.6	6537.3
1954	280.5	501.4	415.2	484.6	879.5	992.8	981.8	397.3	269.7	362.5	378.2	337.1	6286.5
1955	277.4	322.8	382.9	668.5	874.8	1515.6	714.8	222.0	150.2	360.8	319.3	307.9	5672.2
1956	415.5	570.5	780.5	831.9	1150.9	2519.2	855.8	376.9	320.7	372.7	482.2	377.2	8431.9
1957	553.2	552.2	573.5	669.8	1096.3	2807.4	1541.4	483.9	443.3	498.8	508.9	429.6	9611.4
1958	417.7	554.3	583.2	398.8	853.2	1400.4	658.8	239.4	231.3	375.9	389.8	346.3	6224.4
1959	545.7	547.5	1220.8	435.8	556.8	1789.6	948.7	244.4	253.6	456.5	378.6	392.1	7369.5
1960	522.3	411.9	683.2	428.3	489.8	1084.9	269.1	138.7	160.2	389.5	388.9	268.8	5015.6
1961	295.8	291.3	583.7	145.4	225.8	1184.3	133.5	30.9	380.2	583.5	504.9	317.3	4334.3
1962	524.3	532.7	573.8	648.7	1157.4	2422.3	1098.3	527.8	450.4	550.1	478.2	427.5	9677.1
1963	401.4	677.3	949.8	456.3	1185.9	2647.2	1006.7	286.1	415.8	416.2	452.5	352.2	8906.5
1964	457.7	458.5	843.7	527.4	986.8	2392.9	1686.4	489.1	441.5	421.9	442.9	348.7	9242.2
1965	513.1	502.9	598.8	1293.5	1174.5	2735.9	2588.4	786.5	641.5	719.8	460.5	455.9	12457.6
1966	422.5	414.9	647.8	383.8	607.7	966.1	397.1	165.7	184.8	389.2	411.2	435.8	5434.2
1967	534.2	585.2	921.8	538.4	985.5	2690.3	2727.3	604.5	467.4	567.8	548.8	493.4	10867.8
1968	676.7	584.1	917.5	486.9	832.9	2522.8	1483.7	697.8	719.3	864.3	615.9	497.3	10542.1
1969	551.4	511.5	1128.3	791.4	1029.4	1340.4	1583.1	427.7	334.5	486.4	475.9	497.7	8461.8
1970	519.4	481.8	571.1	451.5	1252.5	2523.6	1548.1	438.7	419.8	529.8	509.4	507.7	9810.1
1971	502.1	1048.4	1196.9	987.2	1248.9	2719.8	1695.9	599.9	582.8	891.5	638.7	475.3	12651.6
1972	515.8	637.9	1324.8	705.1	1040.2	2179.6	1075.8	575.1	589.3	689.7	674.6	444.7	10704.8
1973	589.9	584.8	885.9	625.7	1284.6	1778.6	829.7	432.2	614.8	662.8	671.1	539.8	9276.2
1974	542.8	544.7	803.3	716.4	882.8	2586.8	1849.8	591.8	506.2	578.6	627.8	513.7	10535.2
1975	567.5	492.8	627.1	742.7	1566.7	2533.1	2932.7	885.9	496.1	.7	1.9	1.5	10779.5
AVERAGE	514.8	488.5	731.7	619.9	908.9	1962.8	1258.7	455.8	399.3	505.9	471.1	388.2	8569.3
MEDIAN	415.7	420.7	667.5	575.8	883.3	1798.6	1075.8	427.7	415.8	487.5	475.9	377.2	8406.5

2000

Without Development Level

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER AT LIVINGSTON

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	82.0	67.7	87.5	150.4	540.1	497.9	316.4	161.4	106.5	102.3	75.9	66.3	2254.3
1940	56.4	55.0	70.9	94.1	455.9	576.6	247.9	118.6	92.0	95.6	77.8	72.0	2012.7
1941	67.7	61.2	67.9	73.5	328.3	428.6	234.8	155.2	162.6	171.6	130.9	110.0	1992.2
1942	86.9	75.8	80.5	157.6	315.9	697.1	472.0	188.7	117.3	99.8	88.4	78.8	2458.7
1943	69.6	61.9	83.3	199.8	426.7	1101.8	821.9	314.4	173.2	128.6	102.0	85.1	3568.2
1944	74.2	68.4	71.6	78.3	295.3	592.2	384.0	173.6	122.3	114.4	94.0	73.6	2141.8
1945	65.1	52.7	65.4	72.2	256.8	665.3	585.4	268.7	171.4	147.3	118.0	92.8	2561.0
1946	88.0	73.9	89.2	200.6	396.6	635.8	328.5	165.9	117.7	114.4	97.2	84.5	2392.2
1947	65.7	62.4	77.5	96.7	540.1	793.6	548.7	270.4	174.6	150.2	115.8	97.8	2993.4
1948	83.6	77.6	79.9	99.5	542.0	1021.8	429.2	223.9	131.3	111.2	93.2	73.0	2966.1
1949	59.2	56.2	69.0	189.4	576.5	739.9	390.3	197.4	129.5	125.1	99.8	72.7	2664.9
1950	55.5	54.6	57.0	93.0	260.9	877.9	698.4	285.2	178.8	144.8	136.4	115.5	2977.8
1951	84.9	76.2	83.1	123.5	516.1	708.4	579.8	329.3	184.1	149.5	113.8	87.0	3035.6
1952	72.7	68.8	76.3	171.4	628.9	836.0	404.7	216.5	127.2	101.1	78.5	71.7	2853.7
1953	73.2	63.0	69.9	83.1	197.0	735.9	458.9	192.9	119.4	101.0	88.2	73.1	2255.5
1954	60.7	55.8	60.3	92.6	494.6	680.4	559.8	232.6	139.6	104.2	88.9	75.3	2644.7
1955	68.5	57.0	71.4	78.0	235.5	607.4	356.7	192.7	117.7	108.2	93.4	85.6	2072.0
1956	85.5	76.5	85.8	130.2	564.9	1096.8	509.4	223.9	131.3	114.6	95.3	80.1	3194.2
1957	66.4	61.9	79.0	78.4	416.5	896.3	493.8	221.0	138.5	118.0	95.5	82.5	2747.7
1958	66.6	60.8	75.9	80.1	472.1	545.9	253.6	151.2	99.7	82.0	83.8	80.3	2051.9
1959	63.5	48.5	62.1	86.1	232.5	955.4	472.3	197.4	126.6	129.7	101.4	90.8	2566.2
1960	79.7	71.5	91.5	114.4	263.8	629.6	248.2	146.0	97.5	94.3	87.2	75.4	1999.0
1961	65.4	60.7	69.1	70.2	259.6	617.5	221.6	123.8	119.1	140.4	119.5	93.6	1960.4
1962	83.7	86.1	91.5	175.7	507.4	906.5	541.7	255.6	146.9	124.1	108.0	96.1	3123.2
1963	65.8	79.8	77.9	83.1	416.3	857.4	416.7	191.1	135.0	114.3	99.4	83.1	2619.8
1964	65.2	55.7	55.7	84.7	362.6	876.0	633.2	257.1	150.8	117.3	101.7	90.6	2850.5
1965	86.0	73.9	81.4	116.9	360.2	1160.5	787.7	326.7	202.0	174.7	129.1	101.5	3600.5
1966	81.7	66.4	81.0	106.6	418.5	530.4	285.3	151.1	112.7	103.5	86.9	77.6	2101.6
1967	74.7	71.8	82.3	84.6	370.0	1122.5	782.3	277.4	153.8	141.6	113.6	92.8	3367.3
1968	80.1	82.1	92.8	96.2	278.8	1039.5	609.8	320.2	222.8	183.0	135.5	106.3	3247.0
1969	87.8	91.8	98.2	165.5	674.2	705.5	492.1	216.9	129.6	123.1	103.6	89.7	2977.9
1970	80.2	75.2	83.0	81.5	409.9	1089.4	603.7	244.3	175.5	147.0	117.2	101.8	3208.6
1971	90.5	91.2	96.8	110.1	482.9	1213.4	809.0	317.7	193.7	162.2	129.0	98.9	3795.3
1972	87.9	81.6	103.5	117.1	424.3	1185.7	563.2	263.2	201.4	191.7	140.2	110.1	3469.8
1973	100.1	86.1	90.5	88.0	355.3	667.0	350.9	186.2	135.3	126.4	112.4	92.8	2390.9
1974	73.5	68.1	82.5	133.1	378.3	1338.5	740.4	296.0	161.3	137.2	104.0	87.5	3600.3
1975	69.5	63.6	83.0	84.2	204.1	819.7	917.8	311.9	180.1	.1	.3	.3	2734.5
AVERAGE	74.8	68.7	79.0	110.8	401.6	822.9	501.4	226.2	145.3	124.7	101.5	85.0	2742.0
MEDIAN	73.5	68.1	79.9	95.2	409.9	739.9	472.3	216.9	135.0	123.1	101.4	85.6	2644.9
80 PERCENTILE	65.2	56.2	69.0	80.1	263.8	607.4	316.4	161.4	117.7	102.3	88.2	73.6	2101.6
60 PERCENTILE	68.5	62.4	76.3	88.0	362.6	697.1	416.7	192.9	129.5	114.4	95.5	82.5	2561.0
40 PERCENTILE	80.1	71.6	82.3	110.1	424.3	876.0	541.7	232.6	146.9	128.6	104.0	90.6	2946.1
20 PERCENTILE	85.5	77.6	89.2	149.4	516.1	1089.4	609.8	277.4	174.6	149.5	118.0	97.8	3208.6
MAXIMUM	100.1	91.8	103.5	200.6	674.2	1338.5	821.9	329.3	222.8	191.7	140.2	115.5	3795.3
MINIMUM	55.5	48.5	55.7	70.2	197.0	428.6	221.6	118.6	92.0	82.0	75.9	66.3	1960.4

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/09/17.

STILLWATER RIVER AT ABSAROKEE

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	19.6	11.7	17.0	20.0	96.7	91.5	60.5	26.0	15.7	18.0	15.0	12.1	403.7
1940	13.2	12.2	11.1	18.1	101.5	204.3	71.0	25.2	24.5	27.4	18.4	16.1	543.1
1941	18.7	11.3	13.2	16.8	86.8	169.2	89.7	52.5	64.7	52.6	30.3	25.2	630.9
1942	25.5	15.2	15.7	30.7	102.0	208.8	201.0	90.5	30.2	32.3	25.9	26.6	760.3
1943	19.6	18.5	28.6	70.5	109.0	289.6	271.3	81.9	52.2	35.3	25.8	20.9	1023.1
1944	13.6	10.1	15.9	18.3	105.0	280.5	220.2	60.8	45.1	33.2	25.8	20.9	849.3
1945	18.3	15.1	16.2	23.0	60.6	211.6	225.2	73.9	43.0	30.6	25.4	19.9	764.7
1946	19.0	15.4	19.6	29.6	60.4	172.4	115.8	39.6	32.7	31.8	24.0	20.5	580.7
1947	19.6	15.2	25.1	34.4	125.6	185.5	192.3	62.3	44.3	43.0	27.5	21.7	796.4
1948	17.2	17.7	21.2	26.5	119.5	274.2	131.0	65.2	28.4	25.8	22.0	18.8	767.4
1949	15.2	10.4	16.1	27.9	113.3	171.8	96.8	37.7	33.0	29.3	22.0	16.5	589.9
1950	11.2	13.8	16.8	20.1	51.7	207.5	187.6	62.9	45.4	38.3	30.0	23.3	708.5
1951	20.8	18.4	19.9	25.9	95.6	137.7	178.9	84.4	58.6	34.6	25.8	19.0	699.1
1952	16.2	14.3	17.5	40.4	138.0	225.0	135.0	71.6	35.1	24.9	22.3	19.4	759.6
1953	17.6	15.1	15.3	19.7	85.9	180.0	136.6	55.5	28.6	21.3	20.7	18.2	574.4
1954	13.8	15.7	18.1	20.0	97.5	125.4	156.6	44.3	23.7	26.1	22.7	16.0	579.8
1955	12.9	12.0	12.7	21.8	87.1	148.8	97.1	36.3	21.7	23.0	18.5	19.0	470.8
1956	17.6	14.5	22.1	26.2	140.3	232.9	106.6	43.1	28.0	23.9	22.2	22.9	710.2
1957	13.4	12.2	14.3	19.4	139.6	342.2	226.9	98.0	60.9	32.9	28.9	24.1	952.7
1958	19.9	16.5	16.3	19.5	146.8	171.1	85.6	51.2	32.5	25.5	24.3	22.7	631.8
1959	18.6	15.1	19.4	24.2	56.6	266.6	128.4	43.6	26.5	31.9	28.1	21.9	680.8
1960	18.2	13.1	13.5	13.3	39.3	148.5	56.4	32.6	18.4	21.5	19.9	17.8	412.4
1961	15.1	14.3	12.6	8.6	55.4	148.9	46.4	27.6	44.9	41.5	32.5	26.6	474.3
1962	20.7	22.4	19.1	33.5	74.8	236.1	152.4	71.1	45.6	37.6	25.0	21.0	759.2
1963	18.4	19.9	15.0	20.3	99.8	265.8	119.2	43.5	41.0	29.5	23.9	17.9	714.1
1964	16.4	15.0	14.5	17.8	69.4	202.4	175.2	42.3	26.3	20.7	23.4	22.9	643.2
1965	20.4	18.5	16.4	25.0	58.0	244.9	204.9	77.9	48.4	39.0	25.6	21.3	800.2
1966	18.5	16.6	18.2	27.4	104.6	137.6	88.4	43.0	29.4	31.4	22.5	19.0	556.5
1967	19.6	15.2	21.0	15.7	73.0	325.0	272.0	63.4	41.1	47.6	29.5	19.3	942.3
1968	19.8	19.2	27.0	21.0	53.7	250.2	168.7	87.0	53.4	39.7	25.6	21.1	786.3
1969	19.9	18.3	18.4	25.5	96.8	172.3	159.9	50.5	25.8	26.6	23.9	18.4	656.2
1970	14.3	14.5	13.4	18.5	120.2	332.7	159.3	50.2	32.4	35.6	26.2	22.7	859.9
1971	22.9	21.6	17.9	27.6	94.5	281.9	187.2	70.8	43.7	44.9	31.8	23.0	887.7
1972	18.9	25.9	34.0	24.9	84.8	238.3	127.2	88.4	43.6	43.7	29.3	22.9	801.8
1973	17.6	16.4	18.2	39.1	112.9	207.5	130.7	47.3	34.1	33.2	24.9	21.2	723.0
1974	20.1	16.0	20.0	28.8	63.4	342.5	225.7	74.8	42.8	33.2	26.4	17.6	911.2
1975	16.1	11.8	18.4	36.2	118.0	271.4	405.7	86.5	35.3	0.0	0.0	0.0	999.3
AVERAGE	17.8	15.6	18.1	25.3	90.8	219.0	156.6	56.5	38.3	31.6	24.2	19.8	713.7
MEDIAN	18.4	15.2	17.5	23.0	95.6	207.5	136.6	52.5	38.6	31.9	25.0	20.9	710.2
80 PERCENTILE	14.3	12.2	14.3	18.3	56.6	148.9	89.7	39.6	25.8	24.9	22.0	17.9	574.4
60 PERCENTILE	17.6	15.0	16.3	20.1	74.8	185.5	128.4	50.2	32.5	29.5	23.9	19.3	656.2
40 PERCENTILE	18.9	15.7	18.2	25.5	99.8	232.9	159.9	60.8	42.8	33.2	25.6	21.2	759.6
20 PERCENTILE	19.9	16.4	20.0	29.8	113.3	274.2	201.0	71.6	48.4	39.0	28.1	22.9	801.8
MAXIMUM	25.5	25.9	34.0	70.5	146.8	342.5	272.0	88.4	64.7	52.6	32.5	26.6	1023.1
MINIMUM	11.2	10.1	11.1	8.6	39.3	91.5	46.4	25.2	15.7	18.0	15.0	12.1	403.7

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/17.

CLARKS FORK OF YELLOWSTONE AT EDGAR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	23.6	16.0	26.2	35.4	160.0	160.9	84.1	18.5	15.3	22.0	20.6	17.9	598.5
1940	13.8	17.3	19.7	26.0	142.0	184.3	38.7	2.5	17.2	34.1	26.2	26.1	547.9
1941	20.6	16.9	15.6	22.0	116.9	166.7	55.8	36.8	81.2	61.8	38.3	30.1	663.7
1942	23.5	18.2	23.2	41.8	95.8	190.9	136.1	20.1	21.8	30.4	32.4	30.4	664.6
1943	23.4	22.4	34.1	32.7	124.2	322.2	286.5	76.5	43.7	32.1	32.6	27.1	1107.5
1944	22.3	20.1	20.1	19.4	100.4	234.8	140.1	25.9	33.3	30.1	27.7	23.5	697.7
1945	23.4	18.8	22.7	20.4	71.3	239.4	219.1	62.4	33.8	35.1	33.4	27.1	806.9
1946	28.2	21.4	24.7	56.2	92.2	207.9	104.0	24.7	25.0	32.8	30.1	26.8	674.0
1947	20.2	20.2	32.8	28.2	163.6	196.2	145.4	41.7	23.5	35.0	32.3	27.7	766.8
1948	24.1	27.0	24.7	25.7	154.0	292.9	81.0	28.3	18.5	22.1	24.6	21.1	744.0
1949	17.2	16.6	27.7	36.0	158.5	234.7	87.5	16.6	25.8	33.3	29.7	29.7	713.3
1950	23.1	21.2	23.1	27.5	67.5	266.6	230.5	59.9	45.3	54.8	44.0	36.8	900.3
1951	29.1	28.6	30.7	33.5	160.1	198.9	220.0	90.9	41.3	45.3	37.3	26.2	941.9
1952	28.2	27.7	25.1	49.6	146.7	232.3	93.2	47.4	22.0	22.7	26.0	29.0	749.9
1953	28.6	19.5	20.5	24.7	49.1	243.6	133.4	36.6	18.8	18.4	27.9	27.9	649.0
1954	24.8	23.0	22.4	28.6	143.7	179.4	173.1	31.1	21.3	23.9	25.2	26.8	743.3
1955	25.8	22.7	25.0	27.1	68.2	193.0	84.2	19.6	12.3	18.1	26.7	28.7	547.4
1956	21.6	22.1	31.7	38.1	179.5	343.9	120.5	83.5	25.9	21.4	32.2	26.0	906.4
1957	21.2	27.1	25.3	24.1	150.8	385.9	168.7	35.9	37.2	36.4	36.2	30.6	939.4
1958	26.4	20.9	21.1	23.5	186.9	199.7	49.1	29.5	23.5	20.2	29.9	30.5	661.2
1959	24.0	21.3	24.5	29.7	52.4	346.3	144.2	34.3	23.1	41.1	35.5	28.0	804.4
1960	19.6	18.9	28.4	29.6	58.4	216.3	35.1	20.6	9.7	20.4	26.8	24.0	507.8
1961	22.6	19.0	18.5	6.6	83.5	238.2	34.1	9.6	54.8	49.6	35.0	26.4	597.9
1962	19.7	22.3	22.0	52.4	104.9	246.9	124.7	52.1	35.0	33.0	30.0	29.8	812.8
1963	20.9	32.6	22.5	25.0	137.3	285.0	95.6	15.8	35.9	24.4	28.5	23.9	747.4
1964	18.7	18.0	19.4	29.2	115.4	260.1	187.0	26.2	17.0	21.5	31.1	28.4	772.0
1965	27.4	23.5	19.6	34.6	91.8	339.0	207.3	73.2	48.0	45.0	34.1	30.3	973.8
1966	24.1	18.8	23.0	24.1	111.3	167.1	65.3	21.4	24.3	28.1	28.9	26.5	562.9
1967	26.2	21.2	21.6	20.4	109.2	376.3	239.7	47.7	27.9	42.1	36.2	28.2	996.7
1968	25.9	23.9	25.7	21.2	83.5	279.2	128.1	79.6	46.0	37.4	31.1	25.5	767.1
1969	24.2	21.8	22.0	39.7	137.0	193.0	98.8	18.4	16.1	29.8	30.1	27.3	658.2
1970	23.8	22.3	21.5	20.2	135.9	305.9	123.6	23.8	38.5	37.6	30.8	27.6	811.5
1971	23.8	24.9	24.8	28.8	125.0	359.2	186.1	61.2	56.2	50.7	37.5	30.5	1008.7
1972	29.0	28.4	36.7	27.6	110.9	378.1	142.1	74.3	55.3	57.9	40.2	28.9	1009.4
1973	27.9	25.5	24.3	32.9	100.1	186.8	91.7	27.7	51.5	36.0	36.5	24.8	665.7
1974	30.3	21.9	24.7	38.4	97.0	393.6	187.9	60.5	35.9	29.6	33.5	27.2	980.5
1975	18.0	19.4	31.7	30.0	98.5	253.3	342.2	67.8	30.8	0.0	.2	.1	892.0
AVERAGE	23.6	22.0	24.6	31.4	115.1	256.8	137.4	39.5	32.2	32.8	30.8	26.7	772.8
MEDIAN	23.8	21.4	23.2	28.2	111.3	238.2	124.7	31.1	25.9	32.8	31.1	27.3	747.4
80 PERCENTILE	20.6	18.8	20.5	22.0	71.3	190.9	81.0	19.6	18.5	22.0	26.8	25.5	649.0
60 PERCENTILE	23.4	20.9	22.5	26.0	100.4	216.3	98.8	26.2	25.5	29.8	30.0	26.8	697.7
40 PERCENTILE	24.1	22.3	24.7	29.6	125.0	246.6	140.1	36.8	35.0	35.0	32.4	28.0	772.0
20 PERCENTILE	27.4	24.9	26.2	38.1	154.0	339.0	187.0	60.5	45.3	42.1	36.2	29.8	939.4
MAXIMUM	30.3	32.6	36.7	42.7	186.9	393.6	286.5	90.9	81.2	61.8	44.0	36.8	1107.5
MINIMUM	13.8	16.0	16.6	6.6	83.5	160.9	34.1	2.5	9.7	18.1	20.6	17.9	507.8

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER AT BILLINGS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	135.6	104.2	213.4	254.7	886.1	941.5	831.9	161.5	120.0	170.4	152.3	133.2	3663.7
1940	96.2	105.3	136.6	149.4	704.3	1106.5	299.7	81.0	109.9	206.9	162.5	135.3	3303.5
1941	117.6	112.7	129.9	158.8	551.4	900.2	333.3	203.6	347.0	421.6	286.1	221.4	3823.9
1942	181.5	150.6	243.0	349.4	789.6	1452.1	855.1	246.7	198.0	231.8	229.6	207.0	5134.3
1943	161.5	223.4	330.5	521.4	784.9	2186.3	1597.0	473.7	306.9	249.0	229.8	192.3	7256.6
1944	163.7	140.2	178.5	146.1	511.9	1697.1	992.9	285.5	281.1	232.6	209.9	144.0	4903.4
1945	160.3	127.0	166.1	157.6	454.7	1474.8	1194.8	383.8	251.5	242.5	241.8	149.7	5044.5
1946	199.8	187.8	197.3	329.2	631.1	1225.8	588.1	189.9	206.6	271.2	216.2	181.1	4424.0
1947	142.5	127.7	194.8	272.7	1037.8	1479.9	971.8	368.4	265.4	299.5	242.1	206.0	5628.5
1948	164.9	156.4	199.6	232.7	1030.9	2132.1	726.3	302.2	171.1	208.3	191.4	135.6	5651.4
1949	120.8	133.0	182.2	288.8	940.2	1319.1	534.8	187.6	200.6	244.2	207.9	125.2	4484.3
1950	89.5	116.9	194.1	206.3	525.2	1629.3	1283.0	447.2	285.5	331.5	294.6	250.6	5653.6
1951	174.5	198.6	231.8	270.0	892.5	1220.6	1066.0	560.8	299.4	316.7	269.9	185.4	5686.1
1952	164.4	158.2	187.2	407.5	1229.6	1601.6	701.1	340.5	202.7	191.8	181.0	167.6	5533.1
1953	173.1	140.9	149.9	164.8	325.1	1454.5	802.2	290.0	171.1	173.0	192.1	174.3	4210.9
1954	123.1	150.4	139.6	197.4	842.0	1069.6	913.6	286.2	173.5	189.1	189.5	160.5	4434.4
1955	135.5	114.7	143.3	235.0	449.5	1143.2	581.5	215.7	142.2	186.7	171.7	173.4	3732.3
1956	161.8	145.6	250.5	308.5	1206.8	1902.6	708.4	309.0	202.8	189.9	212.7	178.1	5776.6
1957	101.8	143.2	187.0	196.0	959.2	2233.9	1048.1	295.6	266.7	243.1	237.5	194.7	6116.7
1958	153.7	135.0	159.1	179.2	952.1	1129.6	431.9	203.5	158.0	168.9	199.9	177.9	4048.7
1959	181.9	125.1	178.9	214.3	497.4	1940.7	860.7	249.6	186.9	269.0	233.1	194.6	5092.1
1960	119.4	139.4	178.5	208.1	396.6	1163.1	319.1	179.0	123.0	164.5	183.6	152.3	3326.7
1961	136.7	133.4	125.1	83.9	418.6	1106.3	260.6	106.6	247.6	308.6	274.8	196.6	3418.7
1962	146.5	221.8	214.8	357.7	801.3	1720.4	886.3	390.2	295.5	247.8	218.2	187.8	5678.2
1963	134.0	228.8	163.5	181.6	773.8	1782.2	656.4	216.3	229.8	199.9	202.4	154.7	4923.3
1964	146.7	152.6	149.5	200.8	699.1	1708.0	1125.4	328.2	212.3	189.2	206.5	187.4	5305.6
1965	210.8	185.7	173.8	304.7	680.8	2077.1	1440.3	550.3	393.1	355.6	257.1	201.4	6830.6
1966	182.2	171.9	203.6	235.3	805.7	959.1	447.9	194.3	185.8	212.6	218.0	193.5	4010.0
1967	191.1	164.6	196.8	184.7	673.8	2435.2	1581.0	384.8	232.3	300.1	251.8	197.4	6793.5
1968	165.8	222.8	227.6	219.0	486.0	2022.4	1114.0	551.4	418.4	380.7	276.9	202.5	6227.4
1969	179.8	180.5	226.1	361.5	964.6	1315.4	923.5	267.1	188.0	292.1	227.2	190.8	5276.5
1970	157.4	160.3	167.9	182.1	1005.7	2164.4	1002.2	313.5	333.1	302.2	240.9	192.0	6221.6
1971	190.8	227.5	196.5	282.8	890.2	2206.4	1279.2	442.1	381.5	348.9	272.3	203.0	6921.1
1972	163.7	199.4	301.9	233.9	709.6	1947.8	853.7	441.9	383.7	390.7	287.4	202.6	6136.2
1973	193.5	172.0	202.3	299.7	849.4	1245.9	624.3	233.2	313.6	264.9	245.7	201.1	4835.5
1974	192.1	148.0	179.2	274.7	608.0	2427.6	1302.8	475.9	289.7	257.2	247.5	183.3	6585.9
1975	151.3	124.1	214.5	305.9	903.2	1945.0	2263.4	538.3	286.1	0.0	1.6	1.2	6734.6
AVERAGE	155.0	157.5	192.3	247.5	751.6	1608.3	891.9	315.6	245.2	249.0	220.6	177.2	5211.6
MEDIAN	161.5	150.4	187.0	232.7	773.8	1479.9	855.1	290.0	229.8	249.0	227.2	187.4	5134.3
80 PERCENTILE	123.1	127.0	149.9	179.2	497.4	1129.6	447.9	194.3	171.1	189.2	191.4	154.7	4010.0
60 PERCENTILE	146.7	140.9	178.5	206.3	680.8	1319.1	708.4	246.7	202.7	231.8	212.7	178.1	4903.4
40 PERCENTILE	163.7	158.2	196.5	254.7	805.7	1708.0	923.5	313.5	265.4	263.1	237.5	192.3	5628.5
20 PERCENTILE	181.5	187.8	214.8	308.7	952.1	2077.1	1125.4	442.1	306.9	308.6	257.1	201.4	6136.2
MAXIMUM	210.8	228.8	330.5	521.4	1229.6	2435.2	1597.0	560.8	418.4	421.6	294.6	250.6	7256.6
MINIMUM	86.2	103.2	125.1	83.9	325.1	900.2	260.6	81.0	109.9	164.5	152.3	125.2	3303.5

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/16.

INFLOW BOYSEN RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	37.9	29.7	56.0	51.5	91.2	79.1	0.0	11.2	42.2	43.5	33.2	29.5	505.0
1940	28.8	27.0	35.6	25.2	47.8	27.8	.3	11.8	71.4	60.5	29.9	37.5	403.6
1941	35.8	27.2	43.8	43.1	183.8	221.3	54.7	113.7	71.4	125.0	65.7	51.5	1057.0
1942	44.3	41.8	58.6	87.3	187.6	251.8	135.3	22.7	41.1	61.5	56.9	45.4	1034.3
1943	50.8	49.7	70.0	131.7	193.3	371.2	310.3	85.7	56.0	61.8	53.9	43.0	1477.4
1944	34.0	37.6	45.6	69.9	226.6	474.3	199.1	17.8	25.7	62.8	44.2	38.0	1275.6
1945	43.0	37.6	55.2	98.8	130.1	243.1	255.2	74.0	76.0	95.8	49.0	40.0	1197.8
1946	45.1	44.0	57.4	73.6	90.2	222.6	92.4	19.9	42.0	91.8	54.5	43.1	896.6
1947	35.9	39.9	57.2	60.5	291.6	486.6	341.0	115.3	54.3	88.4	66.7	47.4	1684.8
1948	50.3	57.5	72.4	68.9	151.3	312.3	94.5	28.5	90.2	98.9	45.3	40.6	1030.7
1949	36.5	40.0	63.6	68.1	191.8	240.5	105.7	29.2	60.0	93.6	69.5	43.5	1042.0
1950	41.0	45.3	53.4	55.3	106.6	376.2	279.0	66.3	96.5	108.0	72.3	51.6	1391.5
1951	45.9	53.1	62.2	65.6	228.2	369.7	275.8	129.8	64.3	128.4	58.3	41.8	1523.1
1952	45.9	42.7	45.2	104.3	228.9	301.6	102.0	66.3	43.5	96.7	42.6	45.0	1174.7
1953	49.6	39.5	41.2	45.5	62.2	281.1	67.4	51.7	32.0	96.7	56.2	45.0	828.1
1954	49.5	45.4	46.9	40.6	200.7	137.0	145.9	48.4	40.0	47.5	45.2	35.5	892.6
1955	36.7	26.7	30.4	42.9	70.3	149.5	57.5	32.0	27.7	54.9	40.9	54.3	623.8
1956	47.7	33.1	39.8	54.3	225.3	409.6	132.2	60.3	40.2	93.4	47.1	39.7	1202.7
1957	34.7	34.1	42.0	53.7	188.4	519.1	329.9	88.3	69.3	111.4	65.9	55.5	1592.3
1958	47.0	50.2	51.3	48.8	302.2	144.2	36.1	52.2	33.9	50.4	47.0	44.1	907.4
1959	37.0	39.2	61.7	45.1	50.6	234.8	49.8	44.2	30.8	68.3	48.6	39.6	739.7
1960	34.3	27.5	51.6	50.9	31.2	70.4	10.6	17.6	25.9	63.9	48.7	33.9	466.5
1961	26.8	29.4	31.4	20.4	83.3	206.5	23.6	28.0	42.3	72.0	53.3	35.5	652.5
1962	39.1	33.4	42.6	87.8	134.8	370.4	162.2	54.6	51.2	64.6	46.5	37.9	1145.1
1963	29.0	40.5	45.1	44.9	91.3	435.4	117.2	54.4	81.3	62.7	45.2	35.9	1082.9
1964	35.9	31.5	38.9	54.2	118.6	324.3	211.4	37.6	30.3	57.3	37.0	35.4	1012.4
1965	43.8	37.9	40.6	80.3	104.6	528.8	349.4	121.9	79.4	103.8	68.7	52.2	1641.4
1966	29.9	37.7	53.9	49.5	77.7	73.5	39.6	83.6	55.1	70.7	47.1	39.5	619.8
1967	36.8	38.3	53.4	41.8	163.5	610.3	434.3	67.1	64.4	96.7	65.0	50.0	1711.6
1968	35.1	47.1	73.9	52.7	81.2	348.0	99.7	99.0	64.7	89.0	83.8	50.4	1124.6
1969	44.3	37.8	57.2	67.9	153.4	248.8	104.4	49.4	48.1	65.4	49.0	39.6	1005.3
1970	33.9	34.5	34.4	41.0	127.5	259.3	92.0	37.6	40.4	51.8	50.0	34.3	836.7
1971	34.5	34.7	36.3	49.6	186.3	641.2	233.1	79.1	85.5	96.2	63.2	54.4	1644.1
1972	50.2	75.6	76.2	57.3	192.5	459.5	146.1	92.3	64.3	79.1	56.4	40.5	1390.0
1973	38.1	32.5	52.2	117.0	254.6	176.8	144.2	46.3	147.8	103.0	77.2	49.2	1298.9
1974	38.5	39.9	70.5	83.1	162.4	422.2	169.2	74.6	41.7	67.4	50.2	34.8	1274.5
1975	35.0	31.3	55.3	43.4	118.6	280.7	412.5	90.9	60.1	.2	.2	.1	1128.3
AVERAGE	39.5	42.1	52.1	61.0	149.4	308.6	158.3	59.0	57.6	73.6	52.2	41.5	1095.0
MEDIAN	37.9	39.2	52.2	54.3	151.3	288.8	117.2	52.2	54.3	65.4	50.0	40.6	1082.0
80 PERCENTILE	34.3	31.5	40.6	44.9	81.2	149.5	49.8	28.0	33.9	56.7	45.2	35.5	739.7
60 PERCENTILE	36.5	37.7	45.6	51.5	118.6	259.3	99.7	44.2	43.5	62.7	48.6	39.6	1012.4
40 PERCENTILE	41.0	40.0	55.9	60.5	183.8	348.0	145.9	66.3	61.7	72.0	54.5	43.5	1185.1
20 PERCENTILE	45.9	47.1	61.7	73.6	200.7	435.4	255.2	85.7	71.4	95.8	65.7	50.0	1390.0
MAXIMUM	50.8	93.4	76.2	131.7	302.2	641.2	434.3	129.8	147.8	128.4	83.8	55.5	1711.6
MINIMUM	26.8	26.7	30.4	20.4	31.2	27.8	0.0	11.2	25.7	43.5	29.9	29.5	403.6

STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 78/02/16.
2000 WITHOUT DEVELOPMENT LEVEL

WIND RIVER AT BOYSEN

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	57.9	57.9	4.9	4.5	3.4	.9	0.0	72.0	72.0	58.5	57.4	56.8	445.9
1940	55.1	55.1	0.0	0.0	0.0	0.0	0.0	72.0	72.0	42.4	41.4	40.4	378.4
1941	39.2	39.2	46.0	65.5	64.6	62.3	58.7	113.7	72.0	120.4	119.2	118.0	934.8
1942	116.6	116.6	84.2	83.8	82.9	80.8	73.7	72.0	72.0	82.8	81.6	80.6	1027.6
1943	79.3	79.3	135.0	171.3	170.5	168.6	162.2	85.7	72.0	93.3	92.1	91.0	1400.2
1944	89.6	89.6	135.0	150.5	149.7	148.0	141.5	72.0	72.0	71.1	70.0	68.9	1257.9
1945	67.6	67.6	105.5	105.1	104.2	102.3	96.1	74.0	76.0	106.6	105.4	104.2	1114.6
1946	102.8	102.8	50.5	50.1	89.1	87.0	39.8	72.0	72.0	90.0	88.8	87.7	852.6
1947	86.3	86.3	135.0	207.2	206.5	204.8	198.6	115.3	72.0	107.9	106.7	105.5	1632.1
1948	104.2	104.2	85.6	85.1	84.2	82.2	75.0	72.0	72.0	78.1	76.9	75.9	995.3
1949	74.5	74.5	90.1	89.6	88.7	86.6	79.3	72.0	72.0	97.3	96.1	95.0	1015.9
1950	93.6	93.6	119.5	119.0	118.2	116.5	110.6	72.0	96.5	117.2	116.0	114.8	1287.6
1951	113.4	113.4	135.0	144.9	144.1	142.4	136.2	129.8	72.0	115.8	114.6	113.4	1474.9
1952	112.0	112.0	97.6	97.2	96.3	94.3	86.9	72.0	72.0	88.9	87.7	86.6	1103.5
1953	85.3	85.3	85.3	84.9	84.0	81.9	34.9	72.0	72.0	85.8	84.7	83.6	779.8
1954	82.3	82.3	61.9	61.4	60.5	58.3	51.2	72.0	72.0	79.0	77.8	76.7	835.4
1955	75.4	75.4	15.4	15.0	14.0	11.8	4.5	72.0	72.0	77.5	76.4	75.3	584.6
1956	74.0	74.0	123.1	122.7	121.8	120.0	113.0	72.0	72.0	81.9	80.7	79.6	1134.8
1957	78.3	78.3	135.0	181.9	181.1	179.5	173.8	88.3	72.0	118.4	117.2	116.0	1519.6
1958	114.6	114.6	58.7	58.3	57.3	66.0	36.1	72.0	72.0	79.2	78.0	76.9	883.8
1959	75.6	75.6	34.1	33.7	32.7	30.5	23.2	72.0	72.0	79.5	78.4	77.3	684.7
1960	76.0	76.0	0.0	0.0	0.0	0.0	0.0	72.0	72.0	88.9	87.9	86.9	699.6
1961	85.6	85.6	24.8	24.4	23.4	21.2	13.7	72.0	72.0	80.6	79.5	78.8	581.2
1962	77.1	77.1	117.8	117.4	116.5	114.5	107.7	72.0	72.0	84.0	82.8	81.7	1120.7
1963	80.4	80.4	93.8	93.4	92.6	90.7	84.1	72.0	81.3	89.6	88.4	87.2	1033.8
1964	85.9	85.9	93.6	93.2	92.4	90.5	84.2	72.0	72.0	73.6	72.4	71.3	987.1
1965	70.0	70.0	135.0	147.5	166.7	185.2	179.8	121.9	79.4	112.8	111.6	110.4	1550.5
1966	109.0	109.0	.0	0.0	0.0	0.0	0.0	72.0	72.0	82.1	81.0	79.9	805.0
1967	78.5	78.5	135.0	225.4	15.8	327.4	320.8	72.0	72.0	105.2	104.0	102.8	1637.3
1968	101.4	101.4	75.3	74.8	73.9	71.9	65.1	99.0	72.0	114.0	112.8	111.7	1073.4
1969	110.3	110.3	74.9	74.5	73.6	71.5	64.5	72.0	72.0	84.4	83.2	82.1	973.3
1970	80.8	80.8	56.6	56.2	55.3	53.2	46.2	72.0	72.0	75.3	74.1	73.0	795.4
1971	71.7	71.7	135.0	199.5	198.6	197.0	190.7	79.1	85.5	115.0	113.8	112.6	1570.1
1972	111.2	111.2	134.2	133.8	133.0	131.1	124.4	92.3	72.0	100.6	99.4	98.2	1341.4
1973	96.8	96.8	91.1	90.7	89.8	87.6	80.2	72.0	107.8	114.6	113.3	112.2	1233.1
1974	110.8	110.8	122.3	121.9	121.1	119.3	112.7	74.6	72.0	93.3	92.1	90.9	1241.8
1975	89.6	89.6	125.5	125.1	124.3	122.6	117.3	90.9	72.0	46.5	45.3	44.2	1092.8
AVERAGE	85.7	85.7	84.7	94.9	88.4	95.4	88.7	80.1	76.7	89.0	87.8	86.7	1043.8
MEDIAN	80.8	80.8	90.1	89.6	84.2	86.6	79.3	72.0	72.0	85.8	84.7	83.6	1027.6
80 PERCENTILE	71.7	71.7	34.1	33.7	23.4	30.5	23.2	72.0	72.0	77.5	76.4	75.3	684.7
60 PERCENTILE	78.3	78.3	74.9	74.5	64.6	71.5	64.5	72.0	72.0	82.1	81.0	79.9	973.3
40 PERCENTILE	86.3	86.3	97.6	97.2	92.6	94.3	86.9	72.0	72.0	93.3	92.1	90.9	1114.6
20 PERCENTILE	109.0	109.0	135.0	144.9	173.0	142.4	136.2	85.7	72.0	112.8	111.6	110.4	1341.4
MAXIMUM	116.6	116.6	135.0	225.4	206.5	327.4	320.8	129.8	107.8	120.4	119.2	118.0	1637.3
MINIMUM	39.2	39.2	0.0	0.0	0.0	0.0	0.0	72.0	72.0	42.4	41.4	40.4	378.4

BLANK PAGE

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/16.

GREYBULL RIVER AT BASIN

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	6.1	5.0	11.5	5.7	2.0	2.2	0.0	0.0	0.0	.2	.7	5.6	39.0
1940	3.9	4.4	5.4	2.9	14.7	4.6	1.2	0.0	1.1	3.9	6.5	7.1	55.7
1941	4.5	3.9	5.9	11.1	17.4	61.0	15.9	55.6	40.3	30.4	17.6	8.7	272.3
1942	4.6	6.4	10.2	17.6	43.6	58.7	12.3	2.2	3.8	6.3	8.1	6.0	179.8
1943	6.3	7.0	15.3	26.8	17.1	57.8	42.3	6.2	3.3	4.1	9.2	8.0	203.4
1944	6.3	6.3	7.8	13.3	45.3	81.7	29.7	2.3	1.0	4.3	7.6	6.2	211.8
1945	6.5	6.1	11.4	8.8	6.3	68.0	48.1	11.9	9.1	7.9	10.0	9.1	203.2
1946	8.2	7.0	10.9	12.7	3.2	16.6	6.5	2.1	13.5	14.4	11.1	6.9	113.1
1947	3.7	5.1	8.1	13.6	22.1	46.1	45.0	6.4	3.8	7.0	11.3	7.3	179.5
1948	6.2	6.0	12.4	18.9	14.0	41.3	15.2	3.2	3.6	5.8	8.3	7.2	142.1
1949	6.0	4.9	12.2	11.0	3.8	30.5	4.8	1.0	.8	4.8	7.8	4.7	92.3
1950	4.3	6.2	7.0	6.3	3.2	5.7	5.9	5.5	6.9	9.3	10.0	9.1	79.4
1951	5.8	5.2	6.7	7.5	5.2	31.1	46.6	12.4	4.4	11.2	9.0	6.4	151.5
1952	5.7	6.0	8.7	34.2	46.1	59.7	10.3	5.9	1.1	1.7	6.5	6.2	192.1
1953	7.1	5.4	7.8	4.8	2.1	25.5	.7	.8	.4	3.1	5.1	6.3	69.1
1954	5.1	5.4	5.5	7.6	2.7	4.4	1.7	0.0	.3	1.3	1.5	4.7	40.2
1955	4.2	4.4	5.1	6.4	.1	1.2	.2	0.0	.2	.6	4.4	6.3	33.1
1956	4.6	4.3	7.3	1.8	2.0	7.2	1.3	1.0	1.2	2.2	5.6	5.5	44.0
1957	5.0	5.1	6.0	3.9	29.9	172.0	57.5	3.5	3.6	4.9	10.3	8.6	310.3
1958	6.1	5.3	5.6	9.1	39.6	24.8	9.7	3.1	1.5	1.7	6.7	6.7	119.9
1959	5.6	5.4	7.4	6.8	3.4	5.3	2.0	.4	.5	4.3	5.5	5.5	52.1
1960	5.1	3.9	7.9	3.5	0.0	.2	0.0	0.0	.4	1.1	4.0	3.3	29.4
1961	3.1	3.8	7.1	.2	0.0	9.7	1.4	.4	9.0	6.9	9.4	5.4	56.4
1962	5.0	13.6	11.2	18.1	4.3	47.0	12.8	6.2	2.7	1.5	6.1	7.1	135.6
1963	3.1	8.5	11.4	5.4	7.9	154.1	7.6	.8	4.1	2.2	7.2	5.8	218.1
1964	6.4	5.4	7.0	7.9	13.7	64.8	46.9	1.9	1.3	1.2	3.4	2.7	162.6
1965	3.0	2.5	4.6	12.2	9.4	103.0	65.0	9.8	13.8	11.4	9.8	8.5	253.0
1966	7.1	5.4	6.3	2.6	0.0	.8	.4	.7	1.9	1.9	7.3	5.6	40.0
1967	4.2	4.1	7.3	2.8	5.5	116.4	58.7	3.1	3.2	3.1	8.6	5.8	222.8
1968	5.3	8.2	7.7	4.7	1.6	24.3	1.9	9.6	4.5	3.9	5.9	6.2	83.8
1969	6.3	5.8	7.0	10.9	3.0	25.6	10.1	1.0	2.2	4.2	7.6	6.3	90.0
1970	3.8	4.9	6.6	4.8	8.6	29.3	5.2	.7	2.3	3.3	7.3	6.4	83.2
1971	5.4	5.5	6.3	6.2	9.6	77.1	7.0	2.4	2.6	12.4	9.0	3.2	146.7
1972	4.3	7.5	11.5	6.5	3.2	39.7	2.0	4.5	1.7	5.0	8.4	6.1	100.4
1973	4.8	5.7	12.8	8.3	27.8	12.0	7.6	2.1	16.8	0.0	0.0	0.0	99.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGE	4.9	5.4	7.9	9.8	11.3	40.8	15.8	4.5	4.6	5.1	6.9	5.8	121.8
MEDIAN	5.1	5.4	7.3	6.8	5.2	29.3	7.0	2.1	2.3	3.9	7.3	6.2	100.4
80 PERCENTILE	3.9	4.3	5.9	3.5	2.0	4.6	1.2	.4	.5	1.3	4.4	4.7	44.0
60 PERCENTILE	4.6	5.1	7.0	6.2	3.2	24.3	4.9	1.0	1.5	3.1	6.5	5.8	83.8
40 PERCENTILE	5.6	5.5	7.8	9.3	8.6	41.3	10.1	3.1	3.3	4.3	8.1	6.3	142.1
20 PERCENTILE	6.3	6.3	11.4	12.7	17.4	64.8	42.3	6.2	4.5	7.0	9.4	7.2	203.2
MAXIMUM	8.2	13.6	15.3	34.2	46.1	172.0	65.0	55.6	40.3	30.4	17.6	9.1	310.3
MINIMUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/16.

INFLOW BUFFALO BILL RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	16.3	10.9	27.6	53.4	186.9	231.9	162.8	48.3	21.4	27.4	31.2	19.8	837.9
1940	14.4	15.3	19.1	34.1	169.1	239.9	72.7	25.6	25.7	32.2	26.9	25.7	700.7
1941	18.1	16.4	17.9	29.0	141.2	254.3	119.8	112.5	92.6	63.5	35.5	27.3	948.1
1942	17.6	13.0	16.7	55.2	130.8	283.6	211.3	33.4	17.8	15.0	19.1	17.8	831.3
1943	14.4	17.4	27.7	145.2	173.9	416.4	382.8	95.9	34.1	22.3	26.9	18.8	1375.8
1944	15.5	12.9	13.4	22.8	135.4	247.8	182.4	30.8	18.8	17.8	14.5	16.7	748.8
1945	13.8	10.3	14.3	20.7	109.2	241.2	283.1	71.9	34.5	32.7	26.2	21.2	899.1
1946	15.7	14.6	22.3	44.2	119.2	278.3	142.9	33.8	28.0	24.7	20.7	17.6	802.2
1947	14.8	13.0	15.2	35.4	210.4	272.5	268.3	82.2	29.5	35.0	25.2	20.2	1021.7
1948	19.8	16.3	15.7	32.2	200.9	375.9	128.2	26.7	15.6	14.0	13.3	10.4	869.0
1949	5.9	10.7	8.5	66.2	185.8	322.2	124.1	19.5	17.1	23.8	24.0	13.2	821.0
1950	12.8	9.1	17.1	37.7	100.3	340.7	292.3	51.7	56.8	60.2	37.7	30.0	1046.4
1951	18.7	20.2	18.1	53.0	227.5	305.5	343.5	110.8	43.2	35.0	26.9	21.5	1231.9
1952	13.4	13.6	14.0	86.4	198.6	316.3	139.1	43.9	22.6	15.8	14.4	15.9	894.0
1953	15.2	13.2	18.7	36.6	78.1	323.7	187.3	37.4	21.9	16.4	19.1	15.1	782.7
1954	15.7	13.8	12.5	43.1	229.0	232.7	210.2	31.0	18.0	13.1	13.4	13.5	846.0
1955	9.2	9.4	11.1	21.4	100.1	248.7	126.0	31.1	15.0	15.4	18.3	21.1	626.8
1956	16.8	12.2	26.8	61.0	275.4	486.4	176.5	44.9	22.2	18.2	20.3	17.7	1138.4
1957	13.5	11.9	15.0	27.9	221.9	427.7	235.5	53.2	40.8	27.0	20.9	21.0	1116.3
1958	18.1	13.4	14.2	25.2	285.6	237.8	82.2	32.5	18.9	13.6	24.6	18.3	784.4
1959	17.3	13.5	16.1	35.0	86.2	408.4	152.6	37.0	22.4	31.8	24.0	18.8	863.1
1960	16.2	14.2	22.8	34.4	90.7	245.3	77.1	26.5	18.8	17.4	15.0	12.9	591.3
1961	10.6	9.9	13.1	14.0	139.1	299.6	66.7	19.7	34.1	51.9	34.9	19.7	733.3
1962	18.8	20.3	19.4	91.3	133.2	362.6	200.2	44.7	26.8	20.9	19.8	17.9	995.9
1963	15.9	20.5	17.0	30.2	192.2	407.6	166.5	31.7	30.8	15.7	21.7	20.2	970.0
1964	18.7	17.0	16.5	27.6	153.5	307.5	296.7	42.7	15.5	18.0	21.5	25.9	961.1
1965	21.4	16.7	19.7	60.8	157.3	462.3	549.9	93.4	54.1	44.6	30.9	25.3	1336.4
1966	21.8	18.0	24.8	35.7	161.9	206.1	105.6	34.3	33.2	21.7	25.1	20.2	708.4
1967	18.3	14.3	19.4	22.2	156.3	460.7	311.6	54.2	22.1	25.5	28.9	21.4	1154.9
1968	20.9	19.0	21.9	19.5	72.5	336.1	182.5	83.8	46.6	27.0	23.4	22.8	876.0
1969	21.5	18.2	21.2	64.3	206.5	223.8	134.8	34.1	23.2	22.8	26.2	19.7	816.3
1970	18.6	16.9	17.9	18.7	207.3	427.9	207.1	47.8	35.3	27.7	25.4	20.5	1071.1
1971	20.6	17.3	17.6	39.0	190.2	495.9	301.3	86.1	39.3	36.3	29.8	19.5	1292.9
1972	18.2	18.7	22.5	27.7	148.2	153.6	113.9	35.7	39.2	39.5	32.1	22.7	672.0
1973	22.1	18.5	35.8	32.1	141.4	418.1	169.2	79.1	53.8	22.0	31.8	23.4	1047.3
1974	20.4	17.1	21.2	63.8	172.1	552.2	259.0	60.0	25.1	22.4	27.0	20.5	1260.8
1975	20.0	16.3	19.8	23.3	95.4	270.7	426.1	71.0	30.7	0.0	0.0	0.0	973.3
AVERAGE	16.8	15.0	18.7	43.5	162.3	327.6	199.8	52.1	31.5	26.2	23.7	19.3	936.4
MEDIAN	16.8	14.3	17.9	35.0	161.2	307.5	176.5	42.7	25.7	22.8	24.6	19.8	876.0
80 PERCENTTLE	13.8	11.9	14.2	22.8	109.2	239.9	119.8	31.0	18.8	15.8	19.1	16.7	748.8
60 PERCENTTLE	15.7	13.5	16.7	32.1	148.2	278.3	152.6	34.3	22.4	21.7	21.7	18.8	837.9
40 PERCENTTLE	18.1	16.4	19.1	37.7	173.9	336.1	200.2	48.3	30.8	27.0	26.2	20.5	961.1
20 PERCENTTLE	19.8	18.0	22.3	61.0	206.5	418.1	283.1	79.1	40.8	35.0	29.8	22.7	1116.3
MAXIMUM	22.1	20.5	35.8	145.2	285.6	552.2	382.8	118.8	92.6	63.5	37.7	30.0	1375.8
MINIMUM	5.9	9.1	8.5	14.0	72.5	153.6	66.7	19.5	15.0	13.1	13.3	10.4	591.3

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/16.

SHOSHONE RIVER AT BYRON

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	74.5	48.7	35.4	17.8	19.3	28.3	66.1	37.4	33.2	30.7	64.7	67.5	523.6
1940	34.9	53.1	26.9	17.8	4.8	13.8	37.5	37.4	33.2	21.7	64.7	67.5	413.3
1941	23.2	22.1	23.1	4.6	5.5	14.5	37.5	37.4	33.2	73.7	98.7	99.5	473.1
1942	97.4	50.8	24.5	17.8	18.0	27.0	114.7	37.4	33.2	21.7	64.7	67.5	574.8
1943	22.6	31.7	35.5	17.8	150.9	159.8	286.2	37.4	33.2	43.4	68.5	69.3	956.3
1944	67.2	50.7	23.1	9.7	0.0	8.4	85.8	37.4	33.2	21.7	64.7	67.5	469.4
1945	22.0	22.1	23.1	6.5	0.0	0.0	186.5	37.4	33.2	40.6	65.7	67.5	504.7
1946	63.5	52.4	30.1	17.8	24.0	33.0	46.2	37.4	33.2	25.1	64.7	67.5	495.0
1947	23.0	45.7	23.1	17.8	42.3	51.3	171.6	37.4	33.2	43.0	68.1	68.9	625.6
1948	66.9	54.1	23.5	17.8	87.7	96.8	37.5	37.4	33.2	21.7	64.7	67.5	608.8
1949	23.2	22.1	23.1	13.2	51.7	60.8	37.5	37.4	33.2	21.7	64.7	67.5	456.3
1950	23.2	22.1	23.1	12.2	18.2	27.4	195.8	37.4	33.2	53.9	79.0	79.8	605.2
1951	77.7	58.0	25.9	17.8	76.2	85.2	246.8	37.4	33.2	54.7	79.8	80.6	873.2
1952	78.5	51.4	23.1	17.8	83.2	92.1	42.4	37.4	33.2	22.1	64.7	67.5	613.4
1953	23.4	36.5	26.5	17.8	2.4	11.6	90.8	37.4	33.2	21.7	64.7	67.5	433.5
1954	23.9	34.8	23.1	17.8	34.2	43.2	113.4	37.4	33.2	21.7	64.7	67.5	515.0
1955	23.2	22.1	23.1	4.3	0.0	0.0	37.5	37.4	33.2	21.7	64.7	67.5	334.8
1956	23.2	22.1	30.6	17.8	174.6	183.6	79.9	37.4	33.2	24.3	64.7	67.5	759.0
1957	21.7	43.6	23.1	16.4	122.5	131.7	138.9	37.4	33.2	35.4	64.7	67.5	736.2
1958	48.7	51.2	23.1	12.9	59.4	68.4	37.5	37.4	33.2	21.7	64.7	67.5	525.7
1959	23.2	22.1	23.1	4.3	35.9	45.2	56.2	37.4	33.2	27.7	64.7	67.5	440.6
1960	25.8	43.8	38.7	17.8	0.0	0.0	37.5	37.4	33.2	21.7	64.7	67.5	388.2
1961	23.2	22.1	23.1	4.3	0.0	0.0	37.5	37.4	33.2	23.3	64.7	67.5	336.4
1962	27.0	43.8	27.2	17.8	76.7	85.7	103.6	37.4	33.2	31.6	64.7	67.5	616.3
1963	37.4	58.3	24.8	17.8	98.2	107.4	69.9	37.4	33.2	24.8	64.7	67.5	641.5
1964	26.9	45.1	24.3	16.4	28.2	37.3	200.1	37.4	33.2	26.4	64.7	67.5	607.6
1965	29.6	46.7	27.5	17.8	123.4	132.5	253.4	37.4	33.2	57.6	82.6	83.4	925.3
1966	81.4	51.6	36.7	17.8	0.0	0.0	37.5	37.4	33.2	21.7	64.7	67.5	449.6
1967	26.5	31.7	27.2	11.0	106.2	115.4	215.2	37.4	33.2	33.4	64.7	67.5	769.4
1968	42.7	56.1	30.3	8.3	2.0	11.2	86.0	37.4	33.2	46.3	71.4	72.2	497.3
1969	70.1	56.0	29.0	17.8	30.5	39.4	38.0	37.4	33.2	26.3	64.7	67.5	510.0
1970	26.8	49.4	25.7	7.5	115.3	124.5	110.5	37.4	33.2	34.4	64.7	67.5	697.1
1971	46.0	55.1	25.4	17.8	145.8	155.0	204.8	37.4	33.2	47.4	72.4	73.2	913.4
1972	71.2	36.5	37.3	17.8	0.0	0.0	37.5	37.4	33.2	32.9	64.7	67.5	436.1
1973	41.5	56.3	43.6	17.8	79.0	88.2	72.7	37.4	33.2	47.7	72.8	73.6	663.7
1974	71.5	54.9	29.0	17.8	177.2	186.4	162.6	37.4	33.2	33.8	64.7	67.5	936.2
1975	44.2	47.4	34.2	12.1	0.0	0.0	329.5	37.4	33.2	21.7	64.7	67.5	692.0
AVERAGE	42.6	42.5	27.6	14.5	53.9	61.2	112.0	37.4	33.2	32.5	67.7	70.0	595.1
MEDIAN	27.0	45.7	25.4	17.8	34.2	43.2	79.9	37.4	33.2	26.4	64.7	67.5	525.7
80 PERCENTILE	23.2	22.1	23.1	8.3	0.0	8.4	37.5	37.4	33.2	21.7	64.7	67.5	440.6
60 PERCENTILE	25.8	43.6	23.5	16.4	19.3	28.3	56.2	37.4	33.2	24.3	64.7	67.5	504.7
40 PERCENTILE	41.5	50.7	26.9	17.8	59.4	68.4	103.6	37.4	33.2	32.9	64.7	67.5	608.8
20 PERCENTILE	70.1	54.1	30.3	17.8	106.2	115.4	186.5	37.4	33.2	43.4	68.5	69.3	736.2
MAXIMUM	97.4	58.3	43.6	17.8	177.2	186.4	286.2	37.4	33.2	73.7	98.7	99.5	956.3
MINIMUM	21.7	22.1	23.1	4.3	0.0	0.0	37.5	37.4	33.2	21.7	64.7	67.5	334.8

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/16.

INFLOW YELLOWTAIL RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	140.3	126.5	135.4	64.6	117.1	123.6	59.4	98.6	121.7	132.4	165.0	169.3	1474.2
1940	112.9	143.7	81.1	57.0	68.2	129.1	67.0	91.2	127.8	165.0	136.7	136.4	1314.2
1941	99.9	104.3	152.1	122.8	158.0	260.4	114.8	242.0	210.6	272.4	292.3	257.6	2317.4
1942	239.4	209.4	238.9	240.1	296.7	394.1	210.5	109.9	142.9	176.5	206.3	177.7	2642.2
1943	95.7	169.3	274.5	267.2	355.7	486.9	585.2	131.2	139.3	190.6	221.0	189.5	3107.9
1944	180.2	165.9	212.1	242.3	391.5	549.7	369.0	121.8	146.4	154.8	194.4	160.4	2888.4
1945	128.1	131.3	205.1	162.6	157.8	363.5	441.4	164.8	208.7	234.5	241.9	226.1	2665.9
1946	215.6	196.5	166.5	160.1	177.6	244.0	165.9	128.3	200.0	185.4	212.1	201.0	2253.0
1947	136.0	167.1	243.7	300.0	441.2	462.9	585.4	183.2	140.7	232.6	241.0	222.3	3356.0
1948	204.9	236.0	252.2	182.2	240.5	342.6	177.1	128.5	151.7	143.7	198.5	159.9	2477.7
1949	127.7	124.5	231.9	152.2	228.9	324.2	145.8	102.3	146.9	185.6	216.4	198.2	2184.7
1950	163.1	177.1	215.7	143.4	192.2	270.6	342.4	151.2	146.3	252.9	252.1	251.9	2639.1
1951	223.6	231.3	226.6	211.9	229.5	346.2	505.0	235.6	154.2	247.3	258.3	225.5	3095.1
1952	243.4	217.7	184.8	210.3	341.7	340.0	156.4	115.8	118.2	159.2	193.8	190.4	2471.6
1953	154.5	163.1	115.3	101.4	81.8	250.3	128.6	110.8	121.0	158.2	206.6	191.3	1783.0
1954	138.8	165.7	134.0	107.3	182.1	168.0	164.2	101.0	119.8	161.0	192.1	184.8	1818.9
1955	112.7	127.1	101.4	98.5	125.5	205.4	74.8	105.8	127.0	164.3	179.2	179.9	1601.7
1956	126.8	125.1	237.7	181.9	373.9	393.3	187.2	106.0	132.1	149.5	182.5	172.0	2368.0
1957	111.4	158.6	204.1	234.9	415.9	624.9	372.8	131.4	146.7	230.1	249.2	225.1	3105.1
1958	190.9	196.8	129.2	94.3	253.4	239.9	59.1	132.1	130.0	159.1	195.6	189.1	1969.6
1959	140.9	143.8	134.9	88.1	118.0	252.1	141.8	106.9	135.9	189.2	191.2	189.7	1832.6
1960	131.1	161.7	131.7	57.5	13.9	82.4	9.7	104.4	143.3	132.4	158.0	143.1	1269.3
1961	96.5	117.4	97.0	56.0	79.1	96.0	37.0	90.9	181.8	179.9	191.5	162.5	1385.6
1962	107.2	224.5	261.2	247.0	321.5	423.2	288.8	144.7	162.0	184.9	207.3	173.8	2746.2
1963	131.5	212.6	166.4	154.0	295.0	522.5	213.0	128.6	184.2	195.8	226.2	185.9	2615.8
1964	153.1	181.3	180.2	179.0	304.5	505.1	357.5	134.9	152.9	171.6	202.9	175.6	2698.7
1965	155.4	169.4	216.8	278.2	418.7	654.3	596.7	225.4	197.5	267.0	206.7	234.7	3620.8
1966	212.9	194.8	74.6	41.2	35.7	27.6	20.9	101.2	135.2	151.6	185.1	181.0	1361.8
1967	145.0	146.9	223.2	265.2	297.1	850.6	700.9	142.7	180.2	218.1	215.3	220.2	3535.3
1968	208.9	231.0	180.0	126.9	168.4	498.9	223.6	227.6	180.5	236.3	250.1	228.3	2760.5
1969	219.5	215.9	170.4	167.9	202.7	257.6	149.4	123.7	134.5	193.0	208.2	198.5	2261.4
1970	145.4	147.3	137.7	96.8	347.8	420.7	238.1	123.5	152.6	181.6	205.5	186.9	2423.9
1971	179.7	185.8	224.3	298.6	491.8	612.8	435.0	130.6	173.3	291.3	275.6	241.3	3540.1
1972	230.9	260.0	280.6	205.1	254.4	444.9	191.5	184.2	162.9	214.3	233.0	197.1	2858.9
1973	184.1	196.2	216.8	178.0	371.7	374.9	210.5	133.5	324.8	251.4	257.0	242.6	2941.5
1974	234.3	218.6	216.2	218.4	417.2	499.0	311.2	127.6	158.5	199.1	217.6	191.4	3009.1
1975	174.7	186.4	243.1	217.8	301.9	443.7	682.9	170.7	144.5	68.9	110.6	112.1	2877.3
AVERAGE	162.6	177.6	186.4	166.9	250.5	364.5	263.3	137.7	159.4	191.9	210.2	193.9	2466.8
MEDIAN	153.1	169.4	184.8	167.9	229.5	346.2	191.5	126.3	146.9	185.4	206.7	189.7	2477.7
80 PERCENTILE	112.9	131.3	131.7	94.3	118.0	205.4	74.8	104.4	130.0	159.1	191.2	172.0	1783.0
60 PERCENTILE	138.8	165.7	166.5	152.2	192.2	270.6	165.9	121.8	142.9	176.5	202.9	185.9	2317.4
40 PERCENTILE	163.1	187.3	215.7	182.2	295.0	394.1	223.6	131.2	154.2	193.0	215.3	197.1	2665.9
20 PERCENTILE	212.9	215.9	231.9	240.1	371.7	499.0	372.8	151.2	181.8	234.5	241.9	225.5	3009.1
MAXIMUM	243.4	260.0	280.6	300.0	491.8	850.6	700.9	242.0	324.8	291.3	292.3	257.6	3620.8
MINIMUM	95.7	104.3	74.6	41.2	13.9	27.6	9.7	90.9	118.2	132.4	136.7	136.4	1269.3

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/16.

BIGHORN RIVER AT ST XAVIER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	172.6	173.0	173.2	127.9	113.5	113.0	112.1	124.2	132.5	165.6	166.7	170.3	1744.6
1940	125.6	126.1	134.0	115.8	64.5	119.6	54.7	78.7	121.6	164.2	138.1	137.5	1380.4
1941	100.1	104.8	138.0	138.4	126.2	117.5	116.3	180.7	185.4	191.6	190.7	189.7	1779.6
1942	287.7	288.1	288.3	187.0	191.9	225.8	247.7	148.8	172.8	178.5	177.5	176.4	2590.4
1943	238.3	238.7	238.9	241.3	248.9	295.6	622.4	180.4	184.4	190.2	189.1	188.0	3056.3
1944	244.6	245.0	245.2	262.8	271.5	323.4	406.2	161.7	165.6	171.3	170.2	169.1	2836.6
1945	213.3	213.7	213.9	128.3	112.1	117.7	478.6	221.3	225.3	231.0	230.0	228.9	2614.3
1946	251.4	251.8	252.0	127.6	110.9	110.2	110.6	191.6	195.6	201.3	200.2	199.1	2202.2
1947	240.8	241.1	241.4	269.0	278.0	330.9	622.5	210.1	214.0	219.8	218.7	217.6	3303.9
1948	289.6	289.9	290.2	149.3	152.4	177.5	214.2	166.6	170.5	176.2	175.1	174.0	2425.5
1949	219.9	220.2	220.5	128.7	116.7	134.0	183.0	176.0	180.0	185.8	184.8	183.7	2133.4
1950	243.8	244.2	244.4	127.5	110.3	109.7	352.4	225.0	229.1	234.9	233.9	232.8	2588.0
1951	285.7	286.0	286.3	144.0	146.8	170.7	542.2	230.3	234.2	239.9	238.8	237.7	3042.5
1952	273.8	274.2	274.4	175.3	179.7	210.7	193.6	161.6	165.6	171.3	170.3	169.2	2419.6
1953	202.8	203.2	203.4	127.9	114.0	112.7	117.8	124.6	129.0	153.3	144.8	120.8	1754.5
1954	199.2	199.5	199.8	128.0	111.8	110.9	153.4	124.2	128.6	152.3	144.1	120.7	1772.5
1955	166.9	167.2	167.5	128.0	113.1	111.9	105.9	116.4	123.8	154.3	145.9	121.8	1622.6
1956	194.5	194.8	195.1	192.5	197.7	232.9	224.4	154.5	158.5	164.2	163.2	162.1	2234.4
1957	216.5	216.9	217.2	290.5	300.6	359.2	410.0	202.6	206.6	212.4	211.5	210.4	3054.4
1958	230.8	231.2	231.4	129.3	112.1	110.1	100.4	148.8	153.0	158.9	157.9	156.9	1920.9
1959	198.4	198.8	199.0	128.5	114.0	112.3	131.0	134.5	138.9	151.9	143.2	136.6	1787.0
1960	200.0	200.4	200.6	127.0	114.6	115.5	102.2	91.9	137.1	133.6	159.4	144.1	1726.6
1961	96.7	117.9	97.8	56.7	75.4	87.1	24.1	78.4	142.7	172.6	193.1	163.6	1306.0
1962	133.5	132.4	134.1	179.5	184.0	216.4	326.0	180.7	184.6	190.3	189.2	188.1	2238.8
1963	228.7	229.0	229.3	199.2	204.8	242.1	250.2	190.3	194.3	200.0	198.9	197.8	2564.6
1964	230.1	230.4	230.7	204.3	210.1	248.6	394.7	173.7	177.7	183.4	182.3	181.2	2647.0
1965	239.0	239.4	239.7	313.1	324.4	388.2	633.9	232.4	236.3	241.9	240.8	239.6	3568.7
1966	219.3	219.6	219.9	127.0	114.4	115.5	64.5	88.7	129.0	152.8	186.4	182.0	1819.3
1967	133.7	133.5	137.1	247.8	255.8	305.6	738.1	201.4	205.4	211.2	210.1	209.0	2988.7
1968	265.1	265.5	265.7	146.0	148.9	174.0	260.8	230.7	234.6	240.2	239.1	238.0	2708.8
1969	260.5	260.8	261.1	127.7	110.6	109.7	161.0	177.7	181.7	187.5	186.5	185.4	2210.2
1970	215.3	215.7	215.9	167.3	171.3	201.0	275.3	176.1	180.1	185.9	184.8	183.7	2372.5
1971	255.1	255.5	255.7	328.7	340.7	408.0	472.2	228.5	232.6	238.5	237.5	236.4	3489.4
1972	315.7	316.0	316.3	179.1	183.6	216.0	228.7	204.4	208.4	214.0	213.0	211.8	2806.9
1973	257.6	257.9	258.2	185.1	190.0	223.4	247.7	248.0	252.1	257.8	256.7	255.6	2889.9
1974	281.6	281.9	282.2	248.1	256.1	304.5	348.4	184.9	188.9	194.7	193.6	192.5	2957.5
1975	259.9	260.3	260.5	196.8	202.2	238.6	720.1	131.5	135.3	144.1	139.1	135.5	2823.7
AVERAGE	221.3	222.3	223.2	175.2	172.3	197.3	290.5	170.3	179.4	189.7	189.3	185.1	2415.7
MEDIAN	228.7	229.0	229.3	146.0	148.9	174.0	228.7	176.1	180.1	185.9	186.5	183.7	2419.6
80 PERCENTILE	172.6	173.0	173.2	127.7	112.1	111.9	110.6	124.2	137.1	158.9	159.4	156.9	1772.5
60 PERCENTILE	215.3	215.7	215.9	128.7	114.6	117.7	183.0	166.6	170.5	176.2	182.3	176.4	2210.2
40 PERCENTILE	239.0	239.4	239.7	179.1	183.6	216.0	260.8	180.7	185.4	191.6	193.1	189.7	2590.4
20 PERCENTILE	260.5	260.8	261.1	241.3	248.9	295.6	410.0	210.1	214.0	219.8	218.7	217.6	2957.5
MAXIMUM	315.7	316.0	316.3	328.7	340.7	408.0	738.1	248.0	252.1	257.8	256.7	255.6	3568.7
MINIMUM	96.7	104.8	97.8	56.7	64.5	87.1	24.1	78.4	121.6	133.6	138.1	120.7	1306.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/17.

TONGUE RIVER AT MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	4.3	4.2	32.7	13.6	0.0	50.0	0.0	0.0	0.0	15.4	4.1	5.1	131.4
1940	3.1	4.3	6.7	0.0	0.0	10.0	0.0	0.0	0.0	16.6	3.0	3.0	46.7
1941	2.8	2.8	2.9	0.0	5.3	37.1	0.0	0.0	10.5	29.2	31.7	15.9	138.1
1942	8.2	4.4	22.2	18.2	28.7	90.0	0.0	0.0	.2	25.6	27.9	15.9	241.6
1943	7.9	15.4	42.8	45.9	36.7	180.0	0.0	0.0	.2	14.6	26.4	13.9	323.7
1944	6.4	2.4	30.8	24.9	72.7	214.0	92.8	0.0	0.0	12.6	31.4	14.9	502.8
1945	8.2	6.4	20.6	16.4	12.7	118.0	36.8	0.0	2.2	36.6	27.4	12.4	297.8
1946	10.4	8.9	47.8	27.3	27.9	97.3	23.3	0.0	13.6	37.7	30.6	18.0	342.7
1947	20.7	14.7	86.5	42.9	73.0	71.9	36.0	0.0	.4	14.7	24.5	14.5	399.7
1948	10.8	13.2	42.6	38.4	55.0	73.5	55.3	0.0	0.0	16.1	29.8	7.1	341.7
1949	6.0	2.6	80.3	24.8	36.0	52.0	0.0	0.0	0.0	7.9	23.6	22.4	255.5
1950	6.7	5.0	16.8	19.8	19.2	22.4	2.1	0.0	5.6	18.7	21.1	9.6	146.9
1951	9.1	8.7	9.3	9.8	15.4	17.9	11.1	.8	19.8	17.8	28.4	8.1	156.2
1952	4.8	5.7	26.8	42.5	51.6	44.9	0.0	0.0	0.0	18.2	10.1	9.1	253.6
1953	7.4	5.4	8.7	4.1	12.3	88.2	0.0	0.0	0.0	13.1	20.3	8.6	168.0
1954	7.2	10.7	9.4	9.1	2.3	.6	0.0	0.0	0.0	2.3	9.5	9.1	60.1
1955	5.7	2.1	11.3	22.6	37.5	57.3	7.9	0.0	0.0	0.0	4.6	5.8	154.7
1956	6.1	5.4	25.1	48.4	24.4	45.6	0.0	0.0	0.0	2.2	14.3	10.2	181.6
1957	4.4	4.1	10.1	17.5	15.4	102.5	16.6	0.0	8.4	12.9	6.7	6.5	205.0
1958	6.5	5.7	9.6	7.8	18.0	20.6	15.4	0.0	0.0	10.9	12.1	11.3	117.8
1959	8.4	6.9	86.6	27.6	13.5	6.5	0.0	0.0	2.4	4.5	6.9	9.3	172.5
1960	8.0	7.2	45.3	15.5	0.0	0.0	0.0	0.0	0.0	0.0	2.3	.8	79.1
1961	1.1	1.9	.4	0.0	0.0	0.0	0.0	0.0	0.0	2.4	1.5	4.6	11.9
1962	4.7	11.5	30.3	32.4	35.4	110.9	6.3	0.0	4.2	12.1	9.1	7.0	263.8
1963	4.5	34.7	23.9	9.5	72.7	157.9	4.0	0.0	2.5	0.0	1.7	.9	312.2
1964	5.1	6.8	7.6	13.9	37.4	173.7	39.9	1.0	7.8	10.3	8.6	7.0	279.3
1965	10.0	23.1	32.7	96.5	46.8	66.3	27.9	6.0	10.1	32.8	16.6	8.0	370.7
1966	5.2	4.3	11.1	4.2	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.7	29.6
1967	5.9	9.4	14.8	16.3	25.4	194.8	51.2	0.0	9.9	11.0	16.0	10.9	365.5
1968	13.6	26.9	43.5	22.6	19.7	149.5	24.9	20.6	26.8	29.8	15.1	8.5	401.5
1969	8.7	8.3	88.7	58.3	54.9	55.4	40.2	0.0	2.5	9.1	4.9	9.9	320.8
1970	9.3	11.0	20.7	31.7	81.4	147.2	15.5	0.0	4.0	13.1	13.3	8.9	356.0
1971	7.7	96.0	105.4	54.3	59.3	87.7	0.0	0.0	4.9	39.3	17.7	8.5	480.7
1972	6.4	14.7	90.8	52.5	35.4	69.8	6.8	.9	7.1	19.6	16.6	6.6	327.4
1973	10.5	11.8	12.9	14.5	72.6	104.1	11.0	0.0	15.5	25.4	20.0	6.2	304.6
1974	21.9	16.3	14.3	16.4	35.8	64.3	8.1	0.0	.9	10.6	14.3	15.9	218.7
1975	26.7	6.2	55.7	45.7	98.9	151.0	122.8	30.9	8.2	0.0	0.0	0.0	546.1
AVERAGE	8.2	11.7	33.2	27.2	33.3	75.4	17.7	1.5	4.5	14.7	15.0	9.1	251.5
MEDIAN	6.7	6.9	22.2	18.2	27.9	66.3	6.3	0.0	.9	13.1	14.3	8.6	253.6
80 PERCENTILE	4.7	4.3	9.4	9.1	5.3	17.9	0.0	0.0	0.0	2.4	4.6	5.8	131.4
60 PERCENTILE	6.1	5.7	14.8	16.3	19.2	90.0	0.0	0.0	0.0	11.0	10.1	8.0	181.6
40 PERCENTILE	7.9	8.9	30.3	24.8	35.8	87.7	11.0	0.0	2.5	15.4	16.6	9.3	297.8
20 PERCENTILE	9.3	14.7	45.3	42.9	54.9	110.9	27.9	0.0	8.4	25.4	26.4	13.9	342.7
MAXIMUM	21.9	96.0	105.4	96.5	81.4	214.0	92.8	20.6	26.8	39.3	31.7	22.4	502.8
MINIMUM	1.1	1.9	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	.8	11.9

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER AT MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	396.9	252.1	458.9	396.6	798.6	1282.1	514.9	229.9	199.5	382.9	321.9	295.3	5681.6
1940	194.6	250.2	325.5	328.7	665.5	1298.0	292.8	98.4	142.1	435.3	296.5	287.1	4616.7
1941	220.6	235.6	323.5	329.7	657.3	1071.6	394.0	336.9	717.1	799.0	555.2	469.0	6089.6
1942	468.3	461.6	648.5	572.0	1020.0	1817.9	1105.6	389.9	339.7	464.6	443.7	394.1	8126.0
1943	396.7	617.4	858.4	887.2	1013.1	2591.8	2297.7	687.5	490.9	485.3	478.6	417.3	11158.0
1944	412.6	373.1	639.5	689.1	845.0	2674.3	1692.1	437.7	413.7	457.6	442.1	324.8	9141.7
1945	407.0	387.1	554.2	390.2	586.9	1781.9	1736.8	583.0	458.1	579.0	514.1	387.0	8225.4
1946	486.2	449.3	586.2	468.3	722.2	1471.6	682.6	332.9	493.5	555.9	480.0	385.4	7014.2
1947	326.5	325.1	593.8	659.6	1337.4	1795.0	1581.9	538.3	452.2	585.3	521.7	455.8	9172.7
1948	459.4	438.4	653.9	698.1	1088.8	2487.1	1132.7	436.5	290.7	674.5	647.2	279.1	8646.5
1949	281.6	337.5	624.9	696.3	993.3	1591.1	721.4	294.8	361.3	461.4	449.7	302.7	6896.1
1950	309.1	348.1	694.9	584.6	623.6	1731.6	1661.4	673.6	509.9	693.4	557.7	497.1	8825.1
1951	457.3	467.3	682.1	500.2	954.1	1500.2	1567.0	821.3	585.2	616.4	563.8	454.2	9169.2
1952	448.6	458.7	662.4	706.1	1417.6	1816.3	904.8	474.7	361.2	418.1	388.7	335.9	8392.8
1953	408.3	359.6	421.8	319.1	448.2	1740.9	867.3	367.9	241.0	397.9	379.6	323.6	6255.5
1954	322.8	404.5	375.8	343.7	903.6	1089.2	1030.2	367.2	254.8	370.2	365.5	300.1	6127.7
1955	297.9	310.6	389.3	508.2	632.1	1320.9	649.9	254.1	211.0	364.8	318.1	335.3	5512.2
1956	384.9	373.0	606.9	568.3	1280.3	2248.3	864.8	399.8	345.3	384.3	443.4	391.1	8250.5
1957	322.4	364.5	471.7	564.9	1219.3	2753.0	1534.4	447.0	501.5	507.8	501.0	430.6	9618.2
1958	416.0	403.2	457.7	339.7	985.5	1384.7	585.9	289.4	276.1	367.3	379.8	346.2	6231.6
1959	352.0	345.4	762.0	389.1	578.7	1875.5	909.5	300.9	295.5	457.1	403.1	384.6	7053.5
1960	324.6	369.4	542.3	373.2	649.7	1158.3	298.5	195.4	216.3	325.5	370.8	281.3	4905.2
1961	270.8	284.1	258.1	139.4	347.7	1159.6	178.4	85.7	395.6	532.9	514.5	336.6	4503.4
1962	297.3	430.7	461.0	563.0	982.0	2057.1	1272.0	515.8	469.0	504.9	440.3	395.0	8388.2
1963	384.2	557.9	476.5	416.4	1015.1	2134.0	874.2	315.1	418.2	402.6	427.9	338.0	7760.1
1964	401.7	415.0	386.2	475.9	948.6	2149.6	1651.1	466.5	418.0	412.0	426.4	384.8	8575.9
1965	509.9	490.4	530.3	848.2	1060.1	2393.5	2114.3	745.1	682.8	674.2	479.8	420.3	10949.0
1966	347.8	368.3	539.6	363.3	695.8	1013.5	413.8	189.3	222.5	339.3	393.7	398.8	5305.8
1967	340.3	327.2	350.2	445.7	827.5	2432.6	2504.9	605.4	487.2	591.8	514.5	496.2	9823.6
1968	626.3	669.9	665.1	442.1	686.0	2340.1	1414.1	694.9	672.1	628.0	550.0	442.3	9811.0
1969	520.2	478.8	831.3	557.1	1069.3	1356.0	1237.6	473.0	375.2	471.9	441.3	470.4	8282.2
1970	501.4	494.3	425.3	356.6	1207.2	2373.1	1520.9	643.9	489.7	517.2	485.9	449.7	9265.3
1971	552.5	997.0	825.5	658.8	1239.1	2423.0	1585.8	632.8	576.1	735.9	594.4	504.8	11485.8
1972	498.7	544.8	1103.1	695.5	991.1	2057.8	1061.4	588.3	555.0	645.3	635.0	399.2	9755.3
1973	538.2	542.4	544.2	536.7	1148.0	1575.3	815.4	460.8	550.6	685.1	684.1	527.1	8548.9
1974	527.1	514.3	563.3	654.1	844.2	2593.8	1768.4	610.7	499.1	529.4	590.6	471.4	10182.5
1975	552.8	490.4	699.5	617.4	1351.2	2134.8	2706.7	890.4	452.5	0.0	.9	0.0	9896.7
AVERAGE	403.9	430.2	563.9	501.7	907.8	1852.6	1189.8	449.9	414.6	485.3	453.1	380.3	8033.0
MEDIAN	396.7	403.2	544.2	489.1	948.6	1795.0	1061.4	437.7	418.0	471.9	443.7	387.0	8282.2
80 PERCENTILE	309.1	327.2	386.2	343.7	632.1	1288.0	585.9	289.4	241.0	392.9	379.8	323.6	6049.6
60 PERCENTILE	356.9	369.4	476.5	442.1	827.5	1575.3	874.2	367.9	361.3	457.1	480.3	391.1	7760.1
40 PERCENTILE	412.6	438.4	593.8	598.2	991.1	2057.1	1272.0	486.5	452.2	517.2	480.0	399.2	8548.0
20 PERCENTILE	498.7	494.3	665.1	572.0	1088.8	2393.5	1632.1	605.4	509.9	585.1	550.0	455.8	9618.2
MAXIMUM	626.3	997.0	1103.1	887.2	1417.6	2753.0	2504.9	821.3	717.1	799.0	684.1	527.1	11485.8
MINIMUM	194.6	235.6	258.1	139.4	347.7	1013.5	178.4	85.7	142.1	325.5	296.5	279.1	4503.4

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/09/17.

POWDER RIVER AT ARVADA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	4.1	.3	25.1	6.3	12.5	11.9	0.0	0.0	0.0	1.1	1.1	3.1	65.6
1940	.0	5.0	13.8	15.4	4.7	11.9	0.0	0.0	0.0	21.7	.6	1.9	75.1
1941	1.6	2.9	6.8	40.6	70.5	15.4	38.8	42.7	7.7	13.1	9.9	7.7	277.8
1942	1.2	3.0	11.7	25.9	35.9	6.9	0.0	0.0	0.0	2.6	4.1	1.7	93.1
1943	2.9	5.2	34.3	37.4	29.1	46.8	0.0	0.0	0.0	0.0	1.7	.4	157.8
1944	0.0	0.0	4.5	29.2	88.3	83.1	12.9	0.0	0.0	2.7	3.7	3.0	227.4
1945	2.3	4.7	27.2	34.2	26.8	53.6	13.5	.9	.8	5.7	7.0	2.2	179.0
1946	5.3	8.3	14.2	19.3	18.3	25.1	10.7	0.0	3.5	5.1	6.0	3.7	119.6
1947	1.7	6.0	53.1	14.6	75.5	35.1	9.2	0.0	0.0	1.5	5.1	2.7	204.6
1948	1.2	8.6	47.8	9.7	21.8	67.0	12.9	0.0	0.0	4.2	4.1	1.3	178.7
1949	0.0	.1	48.9	14.3	23.1	28.9	0.0	0.0	0.0	1.8	1.8	0.0	119.0
1950	0.0	0.0	8.4	17.4	43.2	8.7	0.0	0.0	0.0	2.4	3.0	0.0	83.1
1951	.0	.7	9.5	4.7	8.1	0.0	0.0	0.0	12.0	3.4	2.7	.7	41.8
1952	0.0	1.7	10.0	17.2	43.1	4.7	0.0	0.0	0.0	0.0	.3	0.0	97.0
1953	1.0	2.5	13.2	5.3	0.0	26.7	0.0	3.4	0.0	0.0	0.0	0.0	52.2
1954	0.0	7.8	9.1	11.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.5
1955	0.0	0.0	39.1	25.7	20.2	33.2	0.0	1.6	0.0	0.0	0.0	8.6	128.4
1956	2.0	3.1	32.4	10.2	11.4	5.4	0.0	0.0	0.0	0.0	0.0	.5	65.0
1957	0.0	0.0	8.9	9.0	19.7	55.2	3.5	0.0	0.0	2.3	4.3	2.9	105.8
1958	1.4	.9	7.7	11.2	20.0	12.3	17.2	0.0	0.0	0.0	1.3	.2	72.2
1959	0.0	0.0	17.0	6.0	19.9	14.5	1.1	0.0	0.0	0.0	0.0	.3	58.8
1960	0.0	1.3	32.2	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.2
1961	0.0	0.0	3.9	1.0	5.9	0.0	0.0	0.0	0.0	5.9	2.3	0.0	19.0
1962	0.0	21.8	10.7	20.1	115.4	188.0	38.4	4.6	5.4	19.7	6.6	4.9	435.7
1963	3.4	11.0	9.3	9.6	25.3	45.0	.1	0.0	4.7	.3	2.9	1.0	112.7
1964	1.6	.6	8.3	23.2	30.3	94.2	9.4	0.0	0.0	0.0	2.8	2.1	172.5
1965	4.9	9.6	24.8	36.3	38.5	56.4	18.1	0.0	0.0	4.9	4.1	1.3	199.0
1966	.6	1.8	16.5	11.9	9.3	0.0	0.0	0.0	1.0	0.0	2.4	0.0	43.5
1967	.7	2.7	8.5	6.5	22.1	152.2	37.3	0.0	1.4	4.7	5.4	.9	242.5
1968	.7	3.8	17.3	9.5	36.3	118.9	10.3	2.2	5.3	6.7	4.9	3.2	219.2
1969	4.8	3.3	14.7	10.9	10.0	7.2	0.0	0.0	0.0	0.0	2.8	.7	54.4
1970	1.8	5.4	12.3	8.5	59.3	41.6	1.7	0.0	0.0	1.4	4.1	2.7	138.9
1971	.5	5.1	32.3	12.6	45.4	46.6	0.0	0.0	0.0	5.3	5.3	2.4	153.6
1972	1.3	28.7	34.0	16.6	41.0	29.5	0.0	1.9	0.0	5.9	5.1	.9	165.0
1973	1.6	3.8	16.0	35.4	71.2	19.4	15.4	0.0	13.4	9.8	14.4	14.1	214.6
1974	11.0	8.2	12.9	35.5	14.2	.2	0.0	0.0	0.0	2.2	4.6	2.1	91.0
1975	.9	1.4	12.0	17.1	33.7	94.0	19.2	0.0	0.0	0.0	0.0	0.0	178.3
AVERAGE	1.6	4.6	19.1	17.6	31.7	38.9	7.3	1.6	1.5	3.6	3.4	2.1	132.9
MEDIAN	1.0	3.0	13.8	12.6	22.1	25.1	0.0	0.0	0.0	2.2	2.9	1.3	112.7
80 PERCENTILE	0.0	.1	8.5	8.5	9.3	4.7	0.0	0.0	0.0	0.0	.3	0.0	54.4
60 PERCENTILE	.5	1.8	11.7	10.9	19.9	12.3	0.0	0.0	0.0	1.1	2.4	.7	91.0
40 PERCENTILE	1.4	3.8	16.5	16.6	29.1	33.2	1.7	0.0	0.0	2.7	4.1	2.1	138.9
20 PERCENTILE	2.3	7.8	32.3	25.9	45.4	55.2	12.9	0.0	1.4	5.7	5.1	3.0	199.0
MAXIMUM	11.0	28.7	53.1	60.6	115.4	188.0	38.8	42.7	13.4	21.7	14.4	14.1	435.7
MINIMUM	0.0	0.0	3.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/17.

POWDER RIVER AT LOCATE

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	3.6	0.0	120.2	18.2	19.1	42.6	2.2	0.0	0.0	0.0	0.0	.5	206.4
1940	0.0	0.0	22.3	20.3	5.0	24.7	19.1	5.0	0.0	51.6	3.1	7.6	158.8
1941	2.7	5.7	16.4	57.8	154.5	57.9	24.5	51.6	43.6	34.3	16.9	20.6	486.4
1942	1.0	6.2	55.2	39.5	65.8	62.1	0.0	1.2	0.0	4.6	3.4	4.9	243.8
1943	6.4	208.5	147.0	44.3	42.6	134.7	23.8	1.3	2.2	0.0	3.8	1.3	635.9
1944	.0	0.0	226.4	123.9	169.1	457.9	74.5	5.2	1.1	1.5	5.4	3.3	1068.2
1945	1.1	10.6	55.4	33.7	31.9	135.4	38.7	10.9	6.4	10.7	9.0	4.7	348.4
1946	11.2	17.9	54.4	36.2	54.5	86.2	42.4	6.2	16.0	37.4	14.4	15.2	391.9
1947	10.3	32.9	193.0	61.8	121.1	89.1	35.6	0.0	0.0	2.5	5.0	5.0	556.2
1948	1.2	97.5	201.3	29.5	44.8	114.6	60.5	9.9	0.0	7.7	11.5	.3	578.7
1949	0.0	0.0	223.3	39.9	46.2	68.1	1.6	0.0	0.0	3.9	8.4	1.2	392.5
1950	0.0	0.0	0.0	63.7	68.5	41.7	6.7	0.0	0.0	5.9	2.5	4.4	193.2
1951	0.0	1.3	20.4	17.2	9.2	4.5	4.0	12.5	27.7	11.6	14.6	18.5	141.5
1952	1.5	7.1	98.0	102.8	78.5	32.8	8.8	0.0	0.0	.3	1.2	2.1	333.0
1953	2.3	6.1	26.4	11.0	11.1	97.2	0.0	13.3	0.0	2.9	.2	3.2	173.7
1954	2.5	14.8	19.4	7.9	10.6	0.0	0.0	5.5	7.5	0.0	0.0	2.0	70.2
1955	.4	0.0	27.5	80.4	34.7	48.2	13.2	0.0	0.0	0.0	0.0	0.0	204.4
1956	2.1	.1	48.1	22.0	28.3	29.1	0.0	0.0	0.0	0.0	.5	2.0	152.1
1957	.4	1.1	17.8	12.5	7.6	122.4	19.5	0.0	0.0	2.7	6.5	2.6	192.8
1958	4.4	5.4	12.4	16.5	31.7	40.2	38.3	5.4	0.0	1.3	.2	3.7	159.5
1959	1.4	2.0	156.2	20.7	19.6	23.1	3.1	0.0	0.0	.5	3.0	5.1	234.7
1960	2.3	3.8	120.1	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	147.0
1961	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0	.3	2.0	.4	0.0	13.1
1962	0.0	71.8	46.0	34.0	121.6	250.6	104.9	10.9	3.2	23.5	11.5	4.7	682.6
1963	2.4	58.3	38.3	19.5	48.2	179.5	32.3	0.0	4.6	2.5	6.5	.6	392.6
1964	2.1	2.0	22.8	26.7	29.3	176.5	50.9	.5	0.0	0.0	0.0	.6	311.4
1965	5.1	10.4	9.3	174.8	52.8	96.0	29.6	1.3	1.5	11.1	8.3	2.6	402.7
1966	3.0	2.5	24.3	18.8	6.9	0.0	0.0	0.0	0.0	.1	0.0	.5	58.1
1967	.6	5.7	26.3	16.4	57.6	283.9	90.1	0.0	14.8	10.4	11.3	1.8	518.8
1968	1.2	21.0	114.7	25.0	38.8	205.7	27.3	25.5	21.4	12.7	13.8	3.0	510.0
1969	6.0	4.5	130.3	68.1	48.7	16.4	32.8	0.0	0.0	0.0	6.4	.7	313.8
1970	1.9	9.5	49.2	26.8	98.6	118.9	9.9	0.0	0.0	1.1	8.3	2.0	326.1
1971	.1	107.9	171.7	44.2	60.0	142.9	8.1	0.0	0.0	49.0	17.1	1.0	621.9
1972	2.6	73.6	278.1	36.5	49.6	78.4	16.4	8.1	9.9	15.3	16.7	1.6	586.7
1973	6.1	8.8	31.6	38.3	106.5	87.5	12.0	6.6	30.3	15.9	13.8	3.3	360.6
1974	22.9	27.6	39.7	49.3	47.6	27.8	4.3	1.2	5.1	10.9	14.1	7.3	257.7
1975	5.7	8.3	53.7	45.3	110.4	156.9	81.6	3.2	0.0	0.0	0.0	0.0	467.1
AVERAGE	3.1	22.5	79.2	41.7	52.2	95.5	24.8	5.0	5.3	9.0	6.4	3.7	348.5
MEDIAN	1.9	5.7	46.0	29.5	44.8	68.1	13.2	.5	0.0	2.7	5.4	2.1	313.8
80 PERCENTILE	.0	0.0	19.4	17.2	10.6	23.1	0.0	0.0	0.0	0.0	.2	.6	158.8
60 PERCENTILE	1.2	5.8	27.5	22.0	31.9	42.6	8.1	0.0	0.0	1.5	3.1	1.8	234.7
40 PERCENTILE	2.3	8.8	55.4	36.5	48.7	89.1	23.8	1.3	1.1	5.9	8.3	3.2	360.6
20 PERCENTILE	4.4	27.6	147.0	43.7	68.5	135.4	38.3	8.1	7.5	12.7	13.8	4.9	516.8
MAXIMUM	22.9	208.5	278.1	174.8	169.1	457.9	104.9	51.6	43.6	51.6	17.1	20.6	1068.2
MINIMUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER AT SIDNEY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	371.0	263.8	721.9	399.8	797.1	1147.4	420.1	146.8	133.1	360.4	342.8	302.4	5426.7
1940	185.6	261.9	345.5	377.0	608.3	1535.4	224.7	28.4	96.3	532.4	289.7	296.6	4581.8
1941	210.8	287.7	358.2	390.0	691.6	1150.5	351.1	360.1	814.4	828.5	587.1	516.8	6506.8
1942	460.7	492.6	884.4	561.4	974.9	1874.8	1022.3	333.1	281.8	477.9	495.0	345.8	8204.7
1943	406.5	870.2	1223.8	1058.7	986.4	2660.0	2413.4	673.9	435.7	456.2	489.3	429.9	12104.0
1944	414.0	398.1	1030.8	782.5	896.5	3164.7	1671.1	396.5	346.5	462.3	454.0	323.0	10340.1
1945	417.2	398.0	751.2	386.9	508.6	1709.9	1794.2	527.2	417.1	587.2	516.7	358.2	8372.4
1946	512.2	426.4	690.7	448.0	651.4	1436.5	693.4	238.8	442.6	637.6	542.6	440.4	7160.7
1947	367.7	421.6	1176.6	788.8	1381.6	1752.9	1584.3	479.4	386.8	594.1	553.7	471.1	9918.6
1948	459.5	452.5	782.4	593.4	916.4	2685.5	1228.3	379.9	202.6	492.7	465.2	242.7	8861.1
1949	296.7	329.0	689.7	580.5	841.3	1518.9	658.4	209.2	275.2	443.8	452.8	302.3	6597.8
1950	297.1	394.2	701.9	859.7	578.1	1719.0	1509.2	581.5	435.6	616.4	505.8	496.1	8694.6
1951	467.9	464.3	649.6	663.0	747.9	1388.8	1411.6	745.4	564.2	594.3	585.3	358.4	8645.7
1952	464.4	549.3	749.0	1378.2	1336.5	1837.3	801.5	382.8	282.6	380.7	379.9	334.0	8876.2
1953	398.4	376.4	443.8	302.4	426.3	1856.1	782.3	292.5	179.8	335.9	375.8	302.2	6071.8
1954	271.0	491.9	406.1	458.5	841.9	957.4	981.9	335.4	227.8	359.3	373.3	309.4	6014.0
1955	266.5	311.4	330.0	652.3	637.4	1274.0	652.0	174.7	124.0	356.6	317.7	301.6	5398.2
1956	402.2	359.2	768.4	618.3	1111.0	2273.5	799.9	329.9	293.6	367.2	458.2	370.7	8152.0
1957	348.3	346.9	567.6	593.0	1056.3	2761.6	1472.0	358.8	411.1	486.3	499.5	423.0	9324.5
1958	410.5	352.2	558.4	385.5	815.8	1357.9	589.1	189.9	202.0	366.6	382.2	331.6	5941.7
1959	338.7	340.8	1213.2	423.7	519.3	1747.2	885.5	194.2	220.3	449.2	373.8	379.3	7085.2
1960	316.1	404.9	857.4	415.1	383.3	1056.3	203.4	93.5	132.8	306.4	367.8	258.8	4796.0
1961	289.7	287.6	319.0	136.9	200.5	1133.9	78.8	0.0	331.5	534.5	500.0	313.3	4125.8
1962	320.5	526.0	569.4	626.0	1096.8	2375.2	1538.8	477.0	414.4	540.5	472.8	421.0	9378.3
1963	394.1	670.1	641.8	484.7	1124.0	2601.5	937.1	241.4	379.0	407.6	447.1	325.6	8614.0
1964	430.4	451.4	440.9	513.7	926.4	2347.2	1796.8	435.6	408.8	414.9	437.7	342.2	8945.9
1965	505.9	495.0	589.1	1279.8	1134.5	2690.1	2516.8	733.2	606.1	701.0	455.0	449.3	12155.9
1966	415.7	411.9	680.0	356.7	572.0	931.9	339.8	120.5	155.3	361.5	405.9	429.5	5180.9
1967	332.2	339.4	414.0	522.1	865.1	2643.7	2657.2	554.3	431.4	577.4	543.4	486.9	10367.1
1968	671.4	637.0	909.4	475.3	593.0	2476.9	1394.1	639.7	683.2	654.5	610.4	490.7	10235.6
1969	584.3	504.5	1118.4	690.1	987.4	1297.8	1305.7	379.2	303.3	478.3	470.6	491.2	8570.8
1970	512.1	554.7	563.2	417.6	1212.9	2477.9	1476.6	394.3	387.7	519.4	504.0	501.2	9521.6
1971	594.9	1041.4	1185.1	953.5	1206.9	2664.3	1631.1	555.7	551.2	881.8	633.2	468.6	12367.7
1972	505.9	630.1	1617.2	690.6	1001.7	2135.9	1010.6	515.8	513.3	679.9	669.2	438.1	10408.5
1973	581.8	577.2	675.3	615.0	1222.7	1732.8	760.1	380.0	578.7	652.3	665.7	532.4	8974.1
1974	535.2	537.7	598.2	698.8	842.8	2534.3	1783.1	539.0	472.7	568.9	622.4	507.2	10240.3
1975	560.4	445.3	819.3	730.5	1530.2	2289.2	2863.1	792.4	463.6	1.0	4.9	3.2	10503.1
AVERAGE	412.9	461.1	730.9	601.9	870.9	1919.4	1194.6	384.1	347.2	497.6	466.2	381.4	9288.2
MEDIAN	406.5	421.6	680.0	561.4	842.8	1752.9	1010.6	379.2	379.0	478.3	470.6	370.7	8614.0
80 PERCENTILE	297.1	339.4	440.9	390.0	578.1	1274.0	589.1	189.9	202.0	366.6	375.8	302.4	5941.7
60 PERCENTILE	371.0	398.0	598.2	458.5	797.1	1709.9	801.5	333.1	293.6	449.2	454.0	342.2	8152.0
40 PERCENTILE	417.2	464.3	721.9	615.0	926.4	2135.9	1394.1	394.3	411.1	534.5	499.5	429.5	8876.2
20 PERCENTILE	505.9	549.3	909.4	698.8	1111.0	2601.5	1631.1	539.0	472.7	616.4	553.7	486.9	10235.6
MAXIMUM	671.4	1041.4	1617.2	1378.2	1381.6	3164.7	2657.2	745.4	814.4	881.8	669.2	532.4	12367.7
MINIMUM	185.6	247.7	319.0	136.9	200.5	931.9	78.8	0.0	96.3	306.4	289.7	258.8	4125.8

1985
Recommended Development Level

STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 78/02/17.
1985 RECOMEND DEVELOPMENT LEVEL

YELLOWSTONE RIVER AT LIVINGSTON

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	81.9	67.7	87.4	150.4	541.1	499.0	318.1	162.9	107.4	102.2	75.7	66.1	2260.0
1940	56.3	55.0	78.8	94.1	456.9	577.7	249.6	120.1	92.9	95.5	77.6	71.8	2018.4
1941	67.6	61.2	67.8	73.5	329.3	429.7	236.5	156.7	163.5	171.5	130.7	109.8	1997.9
1942	86.8	75.9	80.4	157.6	316.9	698.2	473.7	190.2	118.2	99.7	88.2	78.6	2464.4
1943	69.5	61.9	83.2	199.4	427.7	1102.9	823.6	315.9	174.1	128.5	101.8	84.9	3573.9
1944	74.1	68.4	71.5	78.3	296.3	593.3	385.7	175.1	123.2	114.3	93.8	73.4	2147.5
1945	85.0	72.7	85.3	72.2	297.8	868.4	387.1	270.2	172.3	147.2	117.8	92.8	2586.7
1946	87.9	73.9	89.1	200.6	397.6	636.9	330.2	167.4	118.6	114.3	97.0	84.3	2397.9
1947	65.6	62.6	77.4	98.7	541.1	794.7	550.4	271.9	175.5	150.1	119.6	97.6	2999.1
1948	83.5	77.6	79.8	99.5	543.0	1022.9	430.9	225.4	132.2	111.1	93.0	72.8	2971.8
1949	59.1	56.2	68.9	149.4	577.5	741.0	392.0	199.9	130.4	125.0	99.6	72.5	2670.6
1950	85.4	74.6	86.9	93.0	261.8	879.0	700.1	286.7	179.7	164.7	136.2	115.3	2983.3
1951	84.8	74.2	83.0	123.5	517.1	709.5	581.5	330.8	185.0	149.4	113.6	86.8	3041.3
1952	72.6	68.8	78.2	171.8	829.9	937.1	406.4	218.0	128.1	101.0	78.3	71.5	2859.4
1953	73.1	63.8	69.9	83.1	194.0	737.0	480.6	194.4	120.3	100.9	88.0	72.9	2281.2
1954	60.6	55.8	60.2	92.6	495.6	681.5	561.5	234.1	140.5	104.1	88.7	75.1	2650.4
1955	68.4	57.0	71.3	78.0	234.5	808.5	358.4	194.2	118.8	108.1	93.2	85.4	2077.7
1956	85.4	76.5	85.7	130.2	565.9	1097.9	511.1	225.4	132.2	114.5	95.1	79.9	3199.9
1957	66.3	61.9	74.9	78.4	417.5	897.4	495.5	222.5	139.4	117.9	95.3	82.3	2753.4
1958	66.5	60.8	75.8	90.1	473.1	547.8	255.3	152.7	100.6	81.9	83.6	80.1	2057.6
1959	63.4	48.5	62.0	86.1	233.5	956.5	474.0	198.9	127.5	129.6	101.2	90.6	2571.9
1960	79.5	71.5	91.4	118.4	284.8	930.7	249.9	147.5	98.4	94.2	87.0	75.2	2004.7
1961	65.3	60.7	69.0	70.2	260.6	618.6	223.3	125.3	120.0	140.3	119.3	93.4	1966.1
1962	83.6	86.1	91.4	175.7	508.4	987.6	543.4	257.1	147.8	124.8	107.8	95.9	3128.9
1963	65.7	79.8	77.8	83.1	417.3	858.5	418.4	192.6	135.9	114.2	99.2	82.9	2625.5
1964	65.1	55.7	55.6	84.7	363.6	877.1	634.9	259.6	151.7	117.2	101.5	90.4	2856.2
1965	85.9	73.9	81.3	114.9	361.2	1161.4	709.4	328.2	202.9	174.6	128.9	101.3	3606.2
1966	81.6	66.4	80.9	106.6	419.5	531.5	287.0	152.6	113.6	103.4	86.7	77.4	2107.3
1967	74.5	71.8	82.2	84.6	371.0	1123.6	704.0	278.9	154.7	141.5	113.4	92.6	3373.0
1968	80.0	82.1	92.7	96.2	279.8	1040.6	611.5	321.7	223.7	182.9	135.3	106.1	3252.7
1969	87.7	91.8	98.1	165.5	675.2	706.6	493.8	218.4	130.5	123.0	103.4	89.5	2983.6
1970	80.1	75.2	82.9	81.5	410.9	1090.5	605.4	245.9	176.4	146.9	117.0	101.6	3214.3
1971	90.4	91.2	96.7	110.1	483.9	1214.5	810.7	319.2	194.6	162.1	128.8	98.7	3801.0
1972	87.8	81.4	103.4	117.1	425.3	1186.8	564.9	264.7	202.3	191.6	140.0	109.9	3475.5
1973	100.0	86.1	90.4	88.0	356.3	668.1	352.6	187.7	136.2	126.3	112.2	92.6	2396.6
1974	73.4	68.1	82.4	133.1	379.3	1339.6	742.1	297.5	162.2	137.1	103.8	87.3	3606.0
1975	69.4	63.6	82.9	84.2	205.1	820.8	919.5	313.4	181.0	.0	.1	.1	2740.2
AVERAGE	74.7	68.6	78.9	110.4	402.6	824.1	503.1	227.6	146.3	124.7	101.3	84.8	2747.6
MEDIAN	73.4	68.1	78.8	96.2	410.9	741.0	474.0	218.4	135.9	123.0	101.2	85.4	2670.6
80 PERCENTILE	65.1	56.2	68.9	80.1	264.8	608.5	318.1	162.9	118.6	102.2	88.0	73.4	2107.3
60 PERCENTILE	68.4	62.4	76.2	88.0	363.6	698.2	418.4	194.4	130.4	114.3	95.3	82.3	2566.7
40 PERCENTILE	80.0	71.8	82.2	110.1	425.3	877.1	543.4	234.1	147.8	128.5	103.8	90.4	2971.8
20 PERCENTILE	85.4	77.6	89.1	149.4	517.1	1090.5	611.5	278.9	175.5	149.4	117.8	97.6	3214.3
MAXIMUM	100.0	91.8	103.4	200.6	675.2	1339.6	823.6	330.8	223.7	191.6	140.0	115.3	3801.0
MINIMUM	55.4	48.5	55.6	70.2	193.0	429.7	223.3	120.1	92.9	81.9	75.7	66.1	1966.1

STUDY NO. 1 YELLOWSTONE LEVEL A OPERATION STUDY 78/02/17.
1985 RECOMEND DEVELOPMENT LEVEL

STILLWATER RIVER AT ABSAROKEE

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	19.6	11.7	17.0	20.1	95.8	91.6	60.7	26.1	15.8	18.1	15.0	12.1	404.7
1940	13.2	12.2	11.1	18.2	101.5	208.4	71.2	25.3	24.8	27.5	18.8	18.1	544.1
1941	18.7	11.3	13.2	18.9	88.9	169.3	89.9	52.6	64.8	52.7	30.3	25.2	631.9
1942	25.5	15.2	15.7	30.4	102.1	204.9	201.2	50.4	30.3	32.4	25.9	22.6	761.3
1943	19.4	18.5	24.6	70.6	109.1	289.7	271.5	82.8	52.3	35.4	25.8	20.9	1024.1
1944	13.4	10.1	15.9	18.4	105.1	280.6	220.4	60.9	45.2	33.3	25.8	20.9	850.3
1945	18.3	15.1	18.2	23.1	80.7	211.7	223.4	74.8	43.1	30.7	23.4	19.9	785.7
1946	19.0	15.4	19.4	29.7	80.5	172.4	116.0	39.7	32.8	31.9	24.0	20.5	581.7
1947	19.4	15.2	25.1	34.5	125.7	185.6	192.5	62.4	44.4	43.1	27.5	21.7	797.4
1948	17.2	17.7	21.2	26.4	119.6	274.3	131.2	65.3	28.5	25.9	22.0	18.8	768.4
1949	15.2	10.4	14.1	24.0	113.4	171.9	97.0	37.8	33.1	29.4	22.0	16.5	590.9
1950	11.2	13.8	14.8	20.2	51.8	207.6	187.8	63.0	45.5	38.4	30.0	23.3	709.5
1951	20.8	18.4	19.9	24.8	95.7	137.8	179.1	84.5	38.7	34.7	25.4	19.0	700.1
1952	16.2	14.3	17.5	40.5	138.1	225.1	135.2	71.7	35.2	25.8	22.3	19.4	760.6
1953	17.4	15.1	15.3	19.4	46.8	140.1	136.8	55.6	28.7	21.4	20.7	18.2	575.4
1954	13.8	15.7	19.1	20.1	97.4	125.5	156.8	44.4	23.8	26.2	22.7	16.8	580.8
1955	12.9	12.8	12.7	21.9	47.2	148.9	97.3	36.4	21.8	23.1	18.5	19.8	471.8
1956	17.4	14.5	22.1	26.3	140.4	233.8	106.8	53.2	28.1	24.8	22.2	22.9	711.2
1957	13.4	12.2	14.3	19.5	139.7	342.3	227.1	58.1	41.8	33.8	28.9	24.1	953.7
1958	19.9	16.6	16.3	19.6	146.4	171.2	85.8	51.3	32.8	25.6	24.3	22.7	632.8
1959	18.6	15.1	19.4	24.3	58.7	266.7	128.6	43.7	26.6	32.8	28.1	21.9	681.8
1960	18.2	13.1	13.5	13.4	39.8	144.8	96.8	32.7	18.5	21.8	19.9	17.8	413.4
1961	15.1	14.3	12.6	8.7	55.5	149.8	46.6	27.7	45.8	41.6	32.5	26.6	475.3
1962	20.7	22.4	19.1	33.4	74.9	238.2	152.6	71.2	45.7	37.7	25.8	21.8	760.2
1963	18.4	19.8	15.8	20.4	89.4	265.9	119.4	43.6	41.1	29.6	23.9	17.9	715.1
1964	16.4	15.8	14.5	17.9	69.5	202.5	175.4	42.4	23.4	20.8	23.4	22.9	644.2
1965	20.6	18.5	16.4	25.1	58.1	249.8	209.1	78.8	48.5	39.1	29.8	21.3	801.2
1966	18.5	14.4	18.2	27.5	104.7	137.7	88.8	43.1	29.5	31.5	22.5	19.8	557.5
1967	19.4	15.2	21.8	15.8	73.1	325.1	272.2	63.5	41.2	47.7	29.5	19.3	943.3
1968	19.8	19.2	27.8	21.1	53.8	254.3	168.9	87.1	53.5	39.8	25.6	21.1	787.3
1969	19.8	18.3	18.4	25.4	96.9	172.4	160.1	50.6	25.9	26.7	23.9	18.4	657.2
1970	14.3	14.5	13.8	19.8	120.3	332.8	159.5	50.3	32.5	35.7	28.2	22.7	860.9
1971	22.8	21.4	17.4	27.7	94.5	282.8	187.4	70.9	63.8	45.8	31.8	23.8	888.7
1972	18.9	25.8	36.8	25.8	84.9	238.4	127.4	88.5	63.7	43.8	29.3	22.9	882.8
1973	17.4	16.4	18.2	39.2	113.8	207.6	130.9	47.4	34.2	33.3	24.9	21.2	724.8
1974	20.1	14.8	20.8	28.4	63.5	342.6	225.9	74.9	42.9	33.3	26.4	17.6	912.2
1975	14.1	11.8	13.8	34.3	114.1	271.5	405.9	88.8	39.4	8.8	.0	.0	1000.2
AVERAGE	17.8	15.7	18.2	25.4	90.9	219.1	156.8	56.7	38.4	31.8	24.2	19.9	714.8
MEDIAN	18.4	15.2	17.5	23.1	95.7	207.6	136.8	52.6	38.7	32.8	25.8	20.9	711.2
80 PERCENTILE	14.3	12.2	14.3	18.4	56.7	149.8	89.9	39.7	25.9	25.8	22.8	17.9	575.4
60 PERCENTILE	17.5	15.8	18.3	20.2	74.9	195.6	128.6	50.3	32.6	29.6	23.9	19.3	657.2
40 PERCENTILE	18.9	16.7	19.7	24.4	99.8	233.8	180.1	68.9	42.9	33.3	25.8	21.2	788.6
20 PERCENTILE	19.9	18.4	20.8	28.9	113.4	274.3	201.2	71.7	48.5	39.1	28.1	22.9	802.8
MAXIMUM	25.5	25.8	36.8	70.6	146.9	342.6	272.2	88.5	64.8	52.7	32.5	26.6	1024.1
MINIMUM	11.2	10.1	11.1	8.7	39.4	91.6	46.6	25.3	15.8	18.1	15.0	12.1	404.7

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 RECOMEND DEVELOPMENT LEVEL

78/02/17.

CLARKS FORK OF YELLOWSTONE AT EDGAR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	23.8	16.2	24.5	35.9	161.3	162.4	81.9	16.3	11.8	22.4	20.9	18.2	597.3
1940	14.0	17.5	20.0	26.4	143.1	185.8	36.5	.3	15.7	34.5	26.5	26.4	546.7
1941	20.8	17.1	16.9	22.4	118.2	168.2	53.6	34.6	79.7	62.2	38.6	30.4	662.5
1942	23.7	18.4	23.5	42.2	97.1	192.4	133.9	17.9	20.3	30.8	32.7	30.7	663.4
1943	23.6	22.6	34.4	83.1	125.5	323.7	284.3	74.3	42.2	32.5	32.9	27.4	1106.3
1944	22.5	28.3	20.4	19.8	101.7	236.3	137.9	23.7	31.8	30.5	28.0	23.8	696.5
1945	23.5	19.0	23.0	28.8	72.6	240.9	216.9	60.2	32.3	35.5	33.7	27.4	805.7
1946	28.4	21.4	25.0	54.6	93.5	209.4	101.8	22.5	23.5	33.2	30.1	27.1	672.8
1947	20.4	28.4	33.1	28.5	164.9	197.7	143.2	39.5	22.8	35.4	32.6	28.9	785.8
1948	24.3	27.2	25.0	26.1	155.3	298.4	78.8	26.1	17.0	22.5	24.9	21.4	742.8
1949	17.6	16.8	28.0	36.4	159.9	236.2	85.3	14.4	24.3	33.7	30.0	30.0	712.1
1950	23.3	21.4	24.6	27.9	88.8	264.1	228.3	57.7	43.8	35.2	44.3	37.1	899.1
1951	20.3	28.8	31.9	33.9	161.4	200.4	217.8	88.7	39.8	45.7	37.6	26.5	940.7
1952	28.4	27.9	25.4	50.0	148.0	231.4	91.0	45.2	20.5	23.1	28.3	29.3	748.7
1953	28.9	19.7	20.8	25.1	50.8	249.1	131.2	34.4	17.3	18.8	28.2	28.2	647.8
1954	25.0	23.2	22.7	20.0	165.0	180.9	170.9	28.9	19.8	24.3	25.5	27.1	742.1
1955	28.0	22.9	24.3	27.4	89.9	194.5	82.0	17.4	10.8	18.5	27.0	29.0	548.2
1956	21.8	22.3	32.0	38.5	180.8	345.4	118.3	41.3	24.4	21.8	32.5	26.3	905.2
1957	21.4	27.3	25.6	24.5	152.1	347.4	166.5	33.7	35.7	30.8	36.5	30.9	936.2
1958	28.6	21.1	21.4	23.9	189.2	201.2	46.9	27.3	22.0	20.6	30.2	30.8	680.0
1959	24.2	21.5	24.4	30.1	53.7	347.8	142.0	32.1	21.6	41.5	35.8	28.3	803.2
1960	19.8	19.1	28.7	30.0	54.7	217.8	32.9	18.4	8.2	20.8	27.1	24.3	500.8
1961	22.9	19.2	18.8	7.0	84.8	239.7	31.9	7.4	53.3	50.0	35.3	28.7	596.7
1962	19.9	22.5	22.3	52.4	106.2	288.4	122.5	49.9	33.5	33.4	30.3	30.1	811.6
1963	21.1	32.8	22.9	25.4	138.6	288.5	93.4	13.6	34.4	24.8	28.8	24.2	746.2
1964	18.9	18.2	19.7	29.4	116.7	261.6	184.8	24.0	15.5	21.9	31.4	28.7	770.8
1965	27.8	23.7	19.6	39.0	99.1	188.5	283.1	71.0	48.3	43.4	34.6	30.8	972.8
1966	24.3	19.0	23.3	24.5	112.6	168.6	63.1	19.2	22.8	28.5	29.2	26.8	561.7
1967	26.4	21.4	21.9	28.8	116.5	377.8	237.5	45.5	26.4	42.5	36.5	28.5	995.5
1968	26.1	24.1	24.6	21.4	44.9	288.7	125.9	77.4	44.5	37.8	31.4	25.8	765.9
1969	24.4	22.0	22.3	40.1	134.3	194.5	98.6	16.2	14.6	30.2	30.4	27.6	657.8
1970	24.8	22.5	21.8	28.8	137.2	307.4	121.4	21.8	37.8	38.8	31.1	27.9	810.3
1971	24.9	25.1	25.1	29.2	126.3	360.7	183.9	59.8	54.7	51.1	37.8	30.8	1007.5
1972	29.2	28.4	37.8	28.8	112.2	379.6	139.9	72.1	53.8	58.3	40.5	29.2	1080.2
1973	28.1	25.7	24.6	33.3	101.4	188.3	89.5	25.5	58.8	36.4	36.8	25.1	664.5
1974	30.5	22.1	25.8	38.9	94.3	395.1	185.7	58.3	34.4	30.8	33.8	27.5	979.3
1975	18.2	19.6	32.8	38.6	88.8	254.2	340.8	65.6	29.3	.1	.5	.4	888.5
AVERAGE	23.4	22.1	24.8	31.8	114.4	258.2	135.2	37.3	30.7	33.2	31.1	27.8	771.6
MEDIAN	24.0	21.8	23.4	28.5	112.8	230.7	122.5	25.9	24.4	33.2	31.4	27.6	746.2
80 PERCENTILE	20.8	19.8	20.8	22.6	72.6	192.4	78.8	17.4	17.8	22.4	27.1	25.8	647.8
60 PERCENTILE	23.6	21.1	22.8	26.6	101.7	217.8	96.6	24.0	22.0	30.2	30.3	27.1	696.5
40 PERCENTILE	24.3	22.5	25.0	30.0	126.3	288.1	137.9	36.6	33.9	35.4	32.7	28.3	770.8
20 PERCENTILE	27.6	26.1	28.5	38.5	155.3	340.5	184.8	58.3	43.8	42.5	36.5	30.1	938.2
MAXIMUM	30.5	32.8	37.8	83.1	188.2	395.1	284.3	88.7	79.7	62.2	44.3	37.1	1106.3
MINIMUM	14.0	16.2	16.9	7.0	44.9	142.4	31.9	.3	8.2	18.5	20.9	18.2	506.6

BLANK PAGE

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 RECOMEND DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER AT BILLINGS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	135.4	103.2	213.4	255.6	851.7	947.8	438.6	166.7	123.0	171.0	151.9	133.0	3691.3
1940	86.0	105.3	134.6	170.3	709.9	1112.8	306.4	85.2	112.9	207.5	162.1	135.1	3331.1
1941	117.4	112.7	129.4	159.7	557.4	906.5	340.0	208.8	390.0	422.2	285.7	221.2	3851.5
1942	181.3	150.6	243.0	350.3	795.2	1458.4	861.8	251.9	201.0	232.4	229.2	206.8	5161.9
1943	161.3	223.4	330.5	522.3	790.5	2192.6	1603.7	478.9	309.9	249.6	229.4	192.1	7284.2
1944	163.5	140.2	178.5	147.0	517.5	1703.4	999.6	250.7	244.1	233.2	209.5	143.8	4931.0
1945	160.1	127.0	164.1	158.5	660.3	1481.1	1201.5	389.0	254.5	263.1	241.4	169.5	5072.1
1946	199.6	187.8	197.3	330.1	635.7	1232.1	594.8	195.1	209.6	271.8	215.8	180.9	4451.6
1947	162.3	127.7	194.8	273.6	1043.4	1486.2	978.5	373.6	268.4	300.1	241.7	205.8	5656.1
1948	164.7	156.6	194.5	233.6	1034.5	2134.4	733.0	307.4	174.1	208.9	191.0	135.4	5679.0
1949	120.6	133.0	162.2	249.7	945.8	1325.4	541.5	192.8	203.6	244.8	207.5	125.0	4511.9
1950	89.3	114.9	148.1	207.2	939.8	1635.6	1789.7	452.4	288.5	332.1	294.2	250.4	5681.2
1951	174.3	198.6	231.4	270.9	898.1	1226.9	1072.7	566.0	302.4	317.3	269.5	185.2	5713.7
1952	164.2	156.2	187.2	408.4	1235.2	1607.9	787.8	345.7	205.7	192.4	186.6	167.4	5560.7
1953	172.9	140.9	149.9	185.7	330.7	1460.8	808.9	295.2	174.1	173.6	191.7	174.1	4238.5
1954	122.9	150.6	139.8	198.3	847.6	1075.9	920.3	291.4	176.5	189.7	189.1	160.3	4462.0
1955	139.3	118.7	144.3	238.9	955.1	1149.5	988.2	220.9	145.2	187.3	171.3	173.2	3739.9
1956	161.8	145.5	250.5	309.4	1212.4	1908.9	715.1	314.2	205.8	190.5	212.3	177.9	5804.2
1957	181.8	143.2	187.8	186.4	984.8	2240.2	1054.8	388.8	269.7	263.7	237.1	194.5	6144.3
1958	153.5	135.8	158.1	188.1	957.7	1135.4	438.6	208.7	161.8	169.5	199.5	177.7	4076.3
1959	141.7	125.1	178.9	215.2	503.8	1947.8	867.4	254.8	189.9	269.6	232.7	194.4	5119.7
1960	119.2	139.4	174.5	209.8	407.4	1169.4	325.8	184.2	128.8	169.1	183.2	192.1	3334.3
1961	136.5	133.4	125.1	86.8	424.2	1112.6	267.3	111.8	270.6	309.2	274.4	196.4	3446.3
1962	146.3	221.8	214.8	358.6	806.9	1726.7	893.8	395.4	288.5	248.4	217.8	187.6	5705.8
1963	133.8	228.8	183.5	182.5	779.4	1788.5	663.1	221.5	232.8	288.5	282.8	154.5	4950.9
1964	146.5	152.6	144.5	201.7	704.7	1714.3	1132.1	333.4	215.3	189.8	206.1	187.2	5333.2
1965	218.4	195.7	178.8	385.8	946.4	2043.4	1447.8	595.5	398.1	356.2	256.7	201.2	6858.2
1966	182.8	171.9	203.6	236.2	811.3	965.4	454.6	199.5	188.8	213.4	217.6	193.3	4037.6
1967	190.9	164.6	196.8	185.8	674.4	2441.5	1587.7	398.8	235.3	308.7	251.4	197.2	6821.1
1968	165.6	222.8	227.6	219.9	671.6	2028.7	1128.7	556.6	421.4	341.3	276.5	202.3	6255.8
1969	179.6	180.5	226.1	362.4	970.2	1321.7	930.2	272.3	191.0	252.7	226.8	190.6	5304.1
1970	157.2	168.3	187.6	189.8	1011.3	2178.7	1008.9	318.7	338.1	302.8	248.5	191.8	6849.2
1971	190.6	227.5	196.5	283.7	895.8	2212.7	1285.9	447.3	384.5	349.5	271.9	202.8	6948.7
1972	163.5	199.6	301.9	236.9	715.2	1954.1	868.6	467.1	386.7	391.3	287.8	202.6	6163.8
1973	193.3	172.8	207.3	298.6	855.8	1252.2	631.8	238.6	314.6	265.5	245.3	200.9	4863.1
1974	191.9	148.8	174.2	275.6	613.6	2433.9	1309.5	481.1	292.7	257.8	247.1	183.1	6613.5
1975	151.1	124.1	214.5	308.8	904.8	1951.3	2270.1	543.5	249.1	.1	1.2	1.0	6701.8
AVERAGE	154.8	157.5	192.3	244.4	757.2	1614.6	896.4	320.7	248.2	249.6	220.3	177.8	5239.1
MEDIAN	161.3	150.4	187.8	233.6	779.4	1486.2	861.8	295.2	232.8	249.6	226.8	187.2	5161.9
80 PERCENTILE	122.9	127.8	149.9	180.1	503.8	1135.8	454.4	199.5	174.1	189.8	191.8	154.5	4037.6
60 PERCENTILE	146.5	140.4	178.5	207.2	686.4	1325.4	715.1	251.9	205.7	232.4	212.3	177.9	4931.0
40 PERCENTILE	163.5	154.2	196.5	255.8	811.3	1714.3	930.2	318.7	268.4	263.7	237.1	192.1	5656.1
20 PERCENTILE	181.3	187.8	214.8	305.6	957.7	2083.4	1132.1	447.3	309.9	309.2	256.7	201.2	6163.8
MAXIMUM	218.4	228.8	330.5	522.3	1235.2	2441.5	1603.7	566.0	421.4	422.2	294.2	250.4	7284.2
MINIMUM	86.0	103.2	129.4	86.8	330.7	906.5	267.3	86.2	112.9	165.1	151.9	125.0	3331.1

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STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 78/02/16.
1985 RECOMMENDED DEVELOPMENT LEVEL

INFLOW BUYSEN RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	33.1	29.3	55.2	51.8	90.9	76.9	0.0	7.6	40.5	44.2	33.7	30.0	499.7
1940	29.6	27.1	43.8	25.5	47.5	25.6	0.0	8.2	69.7	61.1	30.4	38.0	397.9
1941	36.0	27.3	44.3	63.4	183.3	219.1	51.0	110.1	69.7	125.6	66.2	52.0	1047.9
1942	44.3	41.9	54.3	87.6	187.3	249.6	131.6	19.1	39.4	62.1	57.4	45.9	1025.2
1943	51.0	49.6	70.2	132.0	193.3	369.0	306.6	82.1	54.3	62.4	54.4	43.5	1468.3
1944	34.2	37.7	45.5	70.2	226.3	472.1	195.4	14.2	24.0	63.4	44.7	38.5	1266.5
1945	43.2	37.7	55.4	59.1	129.9	280.9	251.5	70.4	74.3	96.4	49.5	40.5	1188.7
1946	45.3	44.1	57.6	73.9	89.4	220.4	88.7	16.3	60.3	92.4	55.0	43.6	887.5
1947	36.1	40.0	57.4	60.3	241.3	444.4	337.3	111.7	52.6	89.0	67.2	47.9	1675.7
1948	50.5	57.6	72.5	64.2	151.0	310.1	90.2	24.9	48.5	59.5	45.8	41.1	1021.6
1949	36.7	41.1	63.2	66.4	191.5	275.3	102.0	25.6	58.3	94.2	70.0	44.0	1072.9
1950	41.2	43.4	54.5	53.6	106.3	574.0	275.3	62.7	44.8	108.6	72.8	52.1	1342.4
1951	46.1	53.2	62.3	65.9	227.3	367.5	272.1	126.2	62.6	129.0	58.8	42.3	1514.0
1952	48.1	52.6	63.4	104.6	224.6	294.4	96.3	62.7	41.8	57.3	43.1	45.5	1115.6
1953	49.8	39.8	41.4	43.1	61.9	270.9	65.7	46.1	30.3	57.3	58.7	45.5	819.0
1954	39.7	35.5	37.1	30.9	290.2	154.8	142.2	88.4	35.3	58.1	45.7	36.0	883.5
1955	33.9	26.3	40.2	45.2	70.5	187.5	53.8	28.8	26.0	53.5	41.4	54.8	614.7
1956	37.4	33.2	37.5	36.5	225.1	397.8	126.5	56.7	58.5	58.8	37.6	30.2	1193.8
1957	38.4	43.2	52.2	54.4	154.1	515.9	320.2	89.7	67.4	112.0	66.4	56.0	1585.2
1958	37.2	33.3	51.3	34.1	301.9	142.6	32.4	88.6	32.2	51.6	37.5	44.6	898.3
1959	37.2	33.5	41.9	45.4	58.3	232.6	85.1	60.6	29.1	64.9	69.1	80.1	730.6
1960	34.3	31.0	41.1	51.6	38.4	55.2	6.9	14.0	24.2	44.3	49.2	34.4	457.4
1961	37.8	33.1	41.3	30.7	53.7	204.3	19.9	24.4	80.3	72.8	53.8	36.0	683.4
1962	44.3	43.3	64.1	91.1	174.3	465.2	155.3	51.0	89.5	85.2	87.0	78.8	1176.0
1963	39.6	41.4	63.3	83.6	91.1	435.2	115.3	50.8	79.3	83.5	65.7	36.4	1073.6
1964	36.1	31.1	44.1	52.0	115.7	392.1	287.7	54.6	93.6	97.5	87.5	75.9	1003.3
1965	38.3	36.3	46.1	39.0	104.2	525.6	395.7	118.3	77.7	134.4	64.2	52.7	1642.3
1966	36.1	33.3	45.3	53.1	77.5	71.5	53.4	82.6	55.4	71.3	37.6	40.0	610.7
1967	37.4	34.4	44.4	52.1	165.2	501.1	436.6	85.5	62.7	81.6	63.9	50.5	1702.5
1968	39.2	37.3	44.1	53.3	91.4	383.2	91.4	65.2	65.0	84.5	84.3	51.9	1115.5
1969	38.5	34.2	47.3	47.2	255.7	181.7	45.2	36.4	46.3	50.5	51.1	98.2	932.2
1970	39.1	34.3	44.2	51.2	321.2	237.1	39.3	38.4	39.7	52.4	38.5	34.6	827.4
1971	33.7	32.3	43.1	53.9	245.4	443.6	220.4	75.5	38.2	39.7	53.7	52.9	1335.3
1972	50.4	73.7	75.4	57.6	192.2	457.3	142.4	88.7	62.6	79.7	56.9	41.0	1380.9
1973	38.3	32.6	52.4	117.3	254.3	174.6	140.5	62.7	186.7	103.6	77.7	49.7	1289.8
1974	38.7	40.0	70.7	83.4	152.1	420.0	165.5	71.0	60.6	66.0	50.7	35.3	1265.4
1975	35.2	31.4	53.5	43.7	118.3	278.5	408.8	87.3	58.4	.8	.7	.6	1119.2
AVERAGE	39.5	37.5	52.6	61.3	189.1	303.4	154.7	55.4	55.9	74.2	52.8	42.0	1086.1
MEDIAN	38.1	33.3	52.3	58.5	151.0	285.6	113.5	48.6	52.6	66.0	50.5	41.1	1072.9
80 PERCENTILE	38.5	31.5	80.5	85.2	80.4	147.5	46.1	24.4	32.2	57.3	45.7	36.0	730.6
65 PERCENTILE	36.7	37.3	45.4	51.8	115.4	257.1	96.0	40.6	41.8	63.3	49.1	40.1	1003.3
50 PERCENTILE	41.2	39.1	59.1	60.8	193.5	385.8	182.2	62.7	60.0	72.6	55.0	44.0	1176.0
20 PERCENTILE	46.1	47.2	61.9	73.9	200.4	483.2	251.5	82.1	69.7	96.4	66.2	50.5	1380.9
MAXIMUM	51.0	73.7	75.4	132.0	301.9	639.0	430.6	126.2	186.7	129.0	84.3	56.0	1702.5
MINIMUM	27.0	26.3	30.5	20.7	30.9	25.6	0.0	7.6	24.0	44.2	30.4	30.0	397.9

STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 78/02/16.
1985 RECOMMENDED DEVELOPMENT LEVEL

ATAD RIVER AT SOYSEY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	56.1	56.1	6.5	6.1	5.8	.5	0.0	72.0	72.0	57.5	56.4	55.4	441.7
1940	54.5	54.5	0.0	0.0	0.0	0.0	0.0	72.0	72.0	41.2	40.1	39.1	373.1
1941	34.2	34.2	65.0	64.6	65.6	64.2	51.0	110.1	72.0	120.4	119.2	118.0	924.4
1942	116.6	116.6	83.0	82.6	81.7	79.6	72.5	72.0	72.0	81.9	80.7	79.7	1019.4
1943	78.6	78.6	135.0	170.1	169.2	167.3	161.0	82.1	72.0	93.3	92.1	90.9	1390.2
1944	89.6	89.6	135.0	149.0	148.2	146.5	140.0	72.0	72.0	70.1	69.0	68.0	1249.7
1945	66.9	66.9	104.6	104.1	103.2	101.3	95.0	72.0	74.3	106.6	105.4	104.2	1104.5
1946	103.1	103.1	87.5	83.9	87.9	85.8	38.6	72.0	72.0	89.0	87.9	86.8	844.4
1947	95.7	95.7	135.0	205.0	205.2	203.6	197.3	111.7	72.0	107.9	106.7	105.5	1622.1
1948	108.4	108.4	84.4	84.0	83.0	81.0	73.8	72.0	72.0	77.2	76.0	74.9	987.1
1949	73.9	73.9	49.0	48.6	47.7	45.6	78.3	72.0	72.0	96.4	95.2	94.1	1006.7
1950	95.0	95.0	116.4	116.0	117.2	115.5	109.6	72.0	94.8	116.7	115.5	114.3	1278.0
1951	115.2	115.2	135.0	143.6	142.8	141.0	134.8	126.2	72.0	115.8	114.5	113.3	1465.3
1952	112.2	112.2	96.4	96.0	95.1	93.1	85.7	72.0	72.0	88.0	86.8	85.7	1095.3
1953	84.7	84.7	84.3	83.9	83.0	80.9	33.8	72.0	72.0	84.9	83.8	82.7	770.7
1954	81.6	81.6	60.9	60.4	59.5	57.3	50.1	72.0	72.0	78.1	76.9	75.8	826.3
1955	74.7	74.7	18.4	18.0	15.8	10.7	3.4	72.0	72.0	76.6	75.5	74.4	575.5
1956	73.4	73.4	122.1	121.7	120.8	118.9	112.0	72.0	72.0	81.0	79.8	78.7	1125.7
1957	77.6	77.6	135.0	140.6	179.4	178.5	172.5	84.7	72.0	118.4	117.1	116.0	1509.6
1958	114.8	114.8	57.5	57.1	56.2	67.4	32.4	72.0	72.0	78.3	77.1	76.0	875.6
1959	75.0	75.0	33.1	32.7	31.7	29.5	22.2	72.0	72.0	78.6	77.5	76.4	675.6
1960	75.3	75.3	0.0	0.0	0.0	0.0	0.0	72.0	72.0	46.8	45.7	44.7	431.9
1961	83.7	83.7	24.1	23.5	22.6	20.4	12.9	72.0	72.0	79.7	78.6	77.5	570.9
1962	76.4	76.4	116.8	116.4	115.5	113.5	106.7	72.0	72.0	83.1	81.9	80.8	1111.6
1963	79.7	79.7	92.8	92.4	91.5	89.7	83.1	72.0	79.6	89.1	87.9	86.7	1024.2
1964	85.6	85.6	92.5	92.1	91.2	89.4	83.1	72.0	72.0	72.7	71.5	70.4	978.4
1965	69.4	69.4	135.0	146.5	145.4	143.9	136.5	110.3	77.7	113.2	112.0	110.8	1540.0
1966	109.7	109.7	0.0	0.0	0.0	0.0	0.0	72.0	72.0	79.7	78.5	77.4	599.0
1967	76.4	76.4	135.0	229.5	20.0	324.0	317.3	72.0	72.0	104.2	103.0	101.9	1626.7
1968	100.8	100.8	74.3	73.8	72.9	70.9	64.0	95.4	72.0	114.0	112.8	111.6	1063.3
1969	110.5	110.5	73.7	73.3	72.4	70.3	63.2	72.0	72.0	83.5	82.3	81.2	965.1
1970	80.1	80.1	55.6	55.2	54.4	52.2	45.1	72.0	72.0	74.3	73.2	72.1	786.3
1971	71.1	71.1	135.0	198.2	197.4	195.7	189.4	75.5	83.8	115.4	114.2	113.0	1559.7
1972	111.9	111.9	132.9	132.5	131.7	129.9	123.1	88.7	72.0	100.6	99.3	98.2	1332.6
1973	97.1	97.1	89.9	89.5	88.6	86.4	79.0	72.0	186.1	114.1	112.9	111.7	1224.4
1974	110.5	110.5	121.2	120.8	120.0	118.2	111.6	72.0	72.0	93.0	91.8	90.7	1232.4
1975	89.6	89.6	124.3	123.9	123.1	121.5	116.2	87.3	72.0	46.5	45.3	44.1	1083.4
AVERAGE	85.4	85.4	85.9	94.9	47.5	94.4	87.5	79.0	76.4	88.3	87.1	86.0	1034.9
MEDIAN	80.1	80.1	89.0	89.5	83.0	85.6	78.3	72.0	72.0	84.9	83.8	82.7	1019.4
80 PERCENTILE	71.1	71.1	33.1	32.7	22.6	29.5	22.2	72.0	72.0	76.6	75.5	74.4	675.6
60 PERCENTILE	76.4	76.4	73.7	73.3	63.6	70.3	63.2	72.0	72.0	81.0	79.8	78.7	965.1
40 PERCENTILE	95.7	95.7	96.4	96.0	91.5	93.1	85.7	72.0	72.0	93.0	91.8	90.7	1104.5
20 PERCENTILE	104.7	104.7	135.0	143.6	131.7	141.0	134.8	82.1	72.0	113.2	112.0	110.8	1332.6
MAXIMUM	116.6	116.8	135.0	229.5	205.2	324.0	317.3	126.2	186.1	120.4	119.2	118.0	1626.7
MINIMUM	34.2	34.2	0.0	0.0	0.0	0.0	0.0	72.0	72.0	41.2	40.1	39.1	373.1

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 RECOMMENDED DEVELOPMENT LEVEL

78/02/16.

GREYBULL RIVER AT BASIN

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	6.1	5.0	11.5	5.7	2.0	2.2	0.0	0.0	0.0	.2	.7	5.6	39.0
1940	3.9	4.4	5.4	2.9	14.7	4.6	1.2	0.0	1.1	3.9	6.5	7.1	55.7
1941	4.5	5.9	5.4	11.1	17.4	41.0	15.9	55.6	40.3	30.4	17.6	8.7	272.3
1942	4.6	5.4	10.2	17.6	45.6	98.7	12.3	2.2	3.8	6.3	8.1	6.0	179.8
1943	6.3	7.0	15.5	20.8	17.1	57.8	46.3	6.2	3.3	4.1	9.2	8.0	203.4
1944	6.3	6.3	7.8	13.3	45.3	81.7	29.7	2.3	1.0	4.3	7.6	6.2	211.8
1945	6.3	6.1	11.4	8.8	6.3	48.0	48.1	11.9	9.1	7.9	10.0	9.1	203.2
1946	8.2	7.8	10.9	12.7	3.2	16.6	6.5	2.1	13.5	14.4	11.1	6.9	113.1
1947	3.7	5.1	8.1	13.8	22.1	46.1	45.0	6.4	3.8	7.0	11.3	7.3	179.5
1948	6.2	6.0	12.4	16.9	14.0	41.3	15.2	3.2	3.6	5.8	8.3	7.2	142.1
1949	6.0	4.9	12.2	11.0	3.8	40.5	4.8	1.0	.8	4.8	7.8	4.7	92.3
1950	4.3	6.2	7.0	6.3	3.2	5.7	5.9	5.5	6.9	9.3	10.0	9.1	79.4
1951	5.6	5.2	6.7	7.5	5.2	31.1	46.6	12.4	4.4	11.2	9.0	6.4	151.5
1952	5.7	6.0	8.7	34.2	46.1	59.7	10.3	5.9	1.1	1.7	6.5	6.2	192.1
1953	7.1	5.4	7.8	4.8	2.1	25.5	.7	.8	.4	3.1	5.1	6.3	69.1
1954	5.1	5.4	5.5	7.6	2.7	4.4	1.7	0.0	.3	1.3	1.5	4.7	40.2
1955	4.2	4.4	5.1	6.4	.1	1.2	.2	0.0	.2	.6	4.4	6.3	33.1
1956	4.6	4.3	7.3	1.8	2.0	7.2	1.3	1.0	1.2	2.2	5.6	5.5	44.0
1957	5.0	5.1	5.0	5.9	29.9	172.0	57.5	3.5	3.6	4.9	10.3	8.6	310.3
1958	6.1	5.5	5.6	9.1	34.0	24.8	9.7	3.1	1.5	1.7	6.7	6.7	119.9
1959	5.8	5.4	7.4	5.8	3.4	5.3	2.0	.4	.5	4.3	5.5	5.5	52.1
1960	5.1	5.9	7.9	5.5	0.0	.2	0.0	0.0	.4	1.1	4.0	3.3	29.4
1961	3.1	3.8	7.1	.2	0.0	9.7	1.8	.4	9.0	6.9	9.8	5.4	56.4
1962	5.0	13.0	11.2	18.1	3.3	87.0	12.8	6.2	2.7	1.5	6.1	7.1	135.6
1963	3.1	4.5	11.4	5.4	7.9	154.1	7.6	.8	4.1	2.2	7.2	5.8	218.1
1964	6.4	5.4	7.0	7.9	13.7	58.8	46.9	1.9	1.3	1.2	3.4	2.7	162.6
1965	5.0	2.5	4.6	12.2	9.8	103.0	65.0	9.8	13.8	11.4	9.8	8.5	253.0
1966	7.1	5.4	6.3	2.6	0.0	.8	.4	.7	1.9	1.9	7.3	5.6	48.0
1967	4.2	4.1	7.3	2.8	5.5	116.4	58.7	3.1	3.2	3.1	8.6	5.8	222.8
1968	5.3	6.2	7.7	4.7	1.6	24.3	1.9	9.6	4.5	3.9	5.9	6.2	83.8
1969	6.3	5.8	7.0	10.9	3.0	25.6	10.1	1.0	2.2	4.2	7.6	6.3	98.0
1970	3.8	4.9	5.6	4.8	8.6	29.3	5.2	.7	2.3	3.3	7.3	6.4	83.2
1971	5.4	5.5	6.3	5.2	4.5	77.1	7.0	2.4	2.8	12.4	9.0	3.2	146.7
1972	4.3	7.3	11.3	6.5	4.2	39.7	2.0	4.5	1.7	5.0	8.4	6.1	100.4
1973	4.5	5.7	12.4	5.3	27.8	12.0	7.6	2.1	18.8	0.0	0.0	0.0	99.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGE	4.9	5.4	7.9	8.8	11.5	40.8	15.8	4.5	4.6	5.1	6.9	5.8	121.8
MEDIAN	5.1	5.4	7.3	6.8	5.2	29.3	7.0	2.1	2.3	3.9	7.3	6.2	100.4
90 PERCENTILE	3.9	4.3	5.9	5.5	2.0	4.6	1.2	.4	.5	1.3	4.4	4.7	44.0
80 PERCENTILE	4.8	5.1	7.0	5.2	3.2	24.3	4.8	1.0	1.5	3.1	6.5	5.8	83.8
20 PERCENTILE	6.3	6.3	11.8	12.7	17.4	84.8	82.3	6.2	4.5	7.0	9.4	7.2	203.2
MAXIMUM	8.2	13.0	15.5	34.2	46.1	172.0	65.0	55.6	40.3	30.4	17.6	9.1	310.3
MINIMUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

STUDY NO. 1 YELLOWSTONE LEVEL H OPERATION STUDY 78/02/16.
1985 RECOMMENDED DEVELOPMENT LEVEL

INFLOW BUFFALO BILL RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	16.5	13.4	27.6	53.4	186.9	241.9	142.8	48.3	21.4	27.4	31.2	19.8	837.8
1940	14.4	15.3	14.1	34.1	169.1	239.9	72.7	25.6	25.7	32.2	26.9	25.7	700.6
1941	17.1	16.4	17.4	24.0	161.2	258.3	119.8	112.5	92.6	63.5	35.5	27.3	948.0
1942	17.5	14.0	13.7	55.2	130.4	285.6	211.3	33.4	17.8	15.0	19.1	17.8	891.2
1943	14.8	17.4	27.7	185.2	173.9	416.4	382.8	95.9	34.1	22.3	26.9	18.8	1375.7
1944	15.3	12.9	13.4	22.5	195.4	267.3	182.4	30.4	18.8	17.8	14.5	16.7	748.7
1945	13.3	10.3	14.3	20.7	109.2	241.2	283.1	71.9	34.5	32.7	26.2	21.2	899.0
1946	15.7	14.6	23.3	84.2	119.2	278.3	142.9	33.8	28.0	24.7	20.7	17.8	802.1
1947	14.3	14.0	15.2	33.4	219.4	272.5	268.3	82.2	29.5	35.0	25.2	20.2	1021.6
1948	14.8	14.3	13.7	32.2	200.9	373.9	128.2	26.7	15.6	14.0	13.3	10.4	868.9
1949	5.9	10.7	5.5	46.2	185.8	322.2	124.1	19.5	17.1	23.6	24.0	13.2	820.9
1950	12.8	9.1	17.1	37.7	100.6	340.7	292.3	51.7	56.8	60.2	37.7	30.0	1046.3
1951	14.7	20.2	15.1	53.0	227.5	305.5	343.5	118.6	83.2	35.0	26.9	21.5	1231.8
1952	13.4	13.3	14.9	80.4	198.6	316.3	139.1	83.9	22.6	15.8	14.4	15.9	893.9
1953	15.2	15.2	16.7	36.6	74.1	325.7	187.3	37.4	21.9	16.4	19.1	15.1	782.6
1954	15.7	13.3	12.5	45.1	229.0	232.7	210.2	31.0	18.0	13.1	13.4	13.5	845.9
1955	9.2	9.4	11.1	21.4	100.1	248.7	126.0	31.1	15.0	15.4	18.3	21.1	624.7
1956	16.3	12.2	25.3	61.0	275.4	485.4	176.5	84.9	22.2	18.2	20.3	17.7	1138.3
1957	13.3	11.4	13.0	27.9	221.3	427.7	235.5	53.2	40.8	27.0	20.9	21.0	1116.2
1958	16.1	13.4	14.2	25.2	285.4	237.8	82.2	32.5	18.9	13.6	24.6	18.3	784.3
1959	17.3	13.5	16.1	45.0	86.2	408.4	152.6	37.0	22.4	31.8	24.0	18.8	843.0
1960	15.2	14.2	22.4	34.4	90.7	285.3	77.1	26.5	18.8	17.4	15.0	12.9	591.2
1961	10.5	9.9	13.1	14.0	139.1	299.6	86.7	19.7	54.1	51.9	34.9	19.7	733.2
1962	18.3	20.3	14.4	91.3	135.2	342.6	200.2	64.7	26.8	20.9	19.8	17.9	995.8
1963	15.9	20.5	17.0	30.2	192.2	407.6	166.5	31.7	30.8	15.7	21.7	20.2	969.9
1964	18.7	17.0	16.5	27.6	153.5	307.5	296.7	42.7	15.5	18.0	21.5	25.9	961.0
1965	21.4	16.7	19.7	60.8	157.3	462.3	389.9	93.4	54.1	48.6	30.9	25.5	1336.3
1966	21.8	18.0	24.8	35.7	181.7	206.1	105.6	34.3	33.2	21.7	25.1	20.2	708.3
1967	16.3	14.3	19.4	22.2	156.3	460.7	311.6	54.2	22.1	25.5	26.9	21.4	1154.8
1968	20.4	19.0	21.4	19.5	72.5	336.1	182.5	83.8	46.6	27.0	23.4	22.8	875.9
1969	21.5	15.2	21.2	54.5	206.5	223.8	134.8	34.1	23.2	22.8	26.2	19.7	816.2
1970	16.6	16.4	17.9	15.7	207.3	427.4	207.1	47.8	35.3	27.7	25.4	20.5	1071.0
1971	20.5	17.3	17.6	39.0	130.2	495.9	301.3	86.1	39.3	36.3	29.8	19.5	1292.8
1972	16.2	16.7	22.5	27.7	146.2	153.6	113.9	35.7	39.2	39.5	32.1	22.7	671.9
1973	22.1	18.5	35.5	32.1	141.4	418.1	169.2	79.1	53.8	22.0	31.8	23.4	1047.2
1974	20.4	17.1	21.2	43.5	172.1	552.2	259.0	60.0	25.1	22.4	27.0	20.5	1260.7
1975	20.0	16.3	14.8	25.3	95.4	270.7	426.1	71.0	30.7	-.0	-.0	-.0	973.2
AVERAGE	16.8	15.9	18.7	43.5	162.2	327.6	194.8	52.1	31.5	26.2	23.7	19.3	936.3
MEDIAN	15.8	14.3	17.9	35.0	161.2	307.5	176.5	42.7	25.7	22.8	24.6	19.8	875.9
80 PERCENTILE	13.8	11.9	14.2	22.4	109.2	239.9	119.8	31.0	18.8	15.8	19.1	16.7	748.7
60 PERCENTILE	15.7	13.5	15.7	32.1	148.2	278.3	152.6	34.3	22.4	21.7	21.7	18.8	837.8
40 PERCENTILE	16.1	14.4	16.1	37.7	173.9	336.1	200.2	48.3	30.8	27.0	26.2	20.5	961.0
20 PERCENTILE	19.3	16.0	22.3	41.0	205.5	416.1	283.1	79.1	40.8	35.0	29.8	22.7	1116.2
[illegible]	22.1	20.3	35.5	185.2	285.4	552.2	382.8	118.8	92.6	63.5	37.7	30.0	1375.7
[illegible]	5.9	9.1	5.5	14.0	72.5	153.6	66.7	19.5	15.0	13.1	13.3	10.4	591.2

STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 78/02/16.
1994 RECOGNIZED DEVELOPMENT LEVEL

SHOSHONE RIVER AT STATION

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	75.5	84.9	39.1	18.1	18.4	20.7	52.7	37.9	33.5	28.1	64.8	67.6	503.2
1940	28.5	51.4	37.7	18.1	4.2	6.2	38.9	37.9	33.5	21.8	64.8	67.6	398.9
1941	24.5	24.8	23.8	5.6	0.0	0.0	38.9	37.9	33.5	67.4	92.1	92.6	439.0
1942	59.2	61.2	23.8	18.1	17.1	14.9	181.3	37.9	33.5	21.8	64.8	67.6	548.4
1943	24.3	22.8	31.0	18.1	150.3	152.2	272.8	37.9	33.5	40.8	65.5	67.6	916.9
1944	61.5	51.4	23.8	11.0	0.0	.3	72.8	37.9	33.5	21.8	64.8	67.6	486.1
1945	24.3	22.8	23.3	5.6	0.8	0.0	173.2	37.9	33.5	38.0	64.8	67.6	491.4
1946	58.0	53.1	30.9	18.1	23.5	25.4	38.9	37.9	33.5	21.8	64.8	67.6	469.8
1947	24.1	24.7	23.8	18.1	81.4	83.8	158.3	37.9	33.5	40.4	65.1	67.6	584.0
1948	40.9	54.8	24.5	18.1	87.2	94.2	38.9	37.9	33.5	21.8	64.8	67.6	598.8
1949	24.3	22.8	23.8	5.6	40.5	42.6	38.9	37.9	33.5	21.8	64.8	67.6	424.1
1950	24.3	22.8	23.8	5.6	6.7	8.9	182.5	37.9	33.5	51.2	76.0	76.5	549.7
1951	73.6	58.7	25.7	18.1	75.7	77.6	293.5	37.9	33.5	52.1	76.8	77.3	841.3
1952	74.4	62.1	23.8	18.1	82.7	84.6	38.9	37.9	33.5	21.8	64.8	67.6	600.1
1953	24.3	22.8	23.8	18.1	0.0	1.2	77.4	37.9	33.5	21.8	64.8	67.6	393.3
1954	24.3	22.8	23.8	18.1	43.0	44.9	100.1	37.9	33.5	21.8	64.8	67.6	483.2
1955	24.3	22.8	23.8	5.6	0.0	0.0	38.9	37.9	33.5	21.8	64.8	67.6	341.0
1956	24.3	22.8	23.8	18.1	153.5	155.6	46.6	37.9	33.5	21.8	64.8	67.6	710.3
1957	22.9	22.7	23.8	17.7	121.9	123.6	125.6	37.9	33.5	32.7	64.8	67.6	708.1
1958	24.2	51.4	23.8	18.2	58.8	60.3	38.9	37.9	33.5	21.8	64.8	67.6	511.2
1959	24.3	22.8	23.8	5.6	20.2	22.1	42.9	37.9	33.5	25.0	64.8	67.6	390.5
1960	25.5	42.5	31.4	18.1	0.0	0.0	38.9	37.9	33.5	21.8	64.8	67.6	381.9
1961	24.3	22.8	23.8	5.6	0.0	0.0	38.9	37.9	33.5	21.8	64.8	67.6	341.0
1962	24.3	22.8	24.3	18.1	79.2	79.2	90.3	37.9	33.5	29.0	64.8	67.6	568.8
1963	27.0	59.0	23.8	18.1	87.7	89.8	56.6	37.9	33.5	22.2	64.8	67.6	609.6
1964	25.0	53.3	25.0	17.7	27.2	29.3	186.7	37.9	33.5	23.7	64.8	67.6	575.7
1965	30.7	58.0	28.2	18.1	122.8	125.0	240.1	37.9	33.5	54.9	79.6	80.1	887.0
1966	77.3	62.3	37.5	18.1	0.0	0.0	38.9	37.9	33.5	21.8	64.8	67.6	489.6
1967	24.3	22.9	23.8	5.6	102.7	104.9	201.8	37.9	33.5	30.7	64.8	67.6	720.4
1968	32.3	54.0	31.1	9.6	1.0	3.1	72.7	37.9	33.5	43.7	68.4	68.9	459.0
1969	46.1	55.7	29.5	18.1	29.9	31.8	38.9	37.9	33.5	21.8	64.8	67.6	496.8
1970	27.4	24.8	23.8	5.6	114.3	116.4	97.2	37.9	33.5	31.8	64.8	67.6	653.1
1971	53.5	53.3	28.2	18.1	145.2	147.4	191.5	37.9	33.5	44.7	69.4	69.9	875.1
1972	47.1	47.2	39.1	18.1	0.0	0.0	38.9	37.9	33.5	26.7	64.8	67.6	429.7
1974	71.4	83.3	48.3	18.1	78.4	80.6	59.4	37.9	33.5	45.0	69.8	70.3	614.6
1975	67.4	75.6	39.8	18.1	176.2	178.4	189.3	37.9	33.5	31.2	64.8	67.6	910.6
1976	53.4	83.1	43.3	18.4	0.0	0.0	316.2	37.9	33.5	21.8	64.8	67.6	672.0
AVERAGE	40.3	54.0	27.3	14.5	51.4	53.4	103.8	37.9	33.5	30.6	66.9	69.3	567.3
MEDIAN	27.0	54.0	25.8	18.1	29.9	31.8	46.6	37.9	33.5	23.7	64.8	67.6	511.2
90 PERCENTILE	24.4	22.8	23.3	5.6	0.0	0.0	38.9	37.9	33.5	21.8	64.8	67.6	424.1
80 PERCENTILE	24.3	22.8	23.8	17.7	19.4	20.7	82.9	37.9	33.5	21.8	64.8	67.6	483.2
20 PERCENTILE	51.4	54.4	29.9	18.1	98.4	40.3	90.3	37.9	33.5	29.0	64.8	67.6	575.7
20 PERCENTILE	64.4	64.3	33.9	18.1	102.7	104.9	173.2	37.9	33.5	40.8	65.5	67.6	704.1
MAXIMUM	84.0	84.0	48.3	18.1	176.2	178.4	272.8	37.9	33.5	67.4	92.1	92.6	916.9
MINIMUM	22.9	22.8	23.8	5.6	0.0	0.0	38.9	37.9	33.5	21.8	64.8	67.6	341.0

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1980	143.9	134.4	139.7	49.2	118.1	190.9	22.7	77.2	111.5	192.8	167.6	171.5	1391.9
1981	164.0	164.1	85.0	93.0	44.6	190.8	83.0	69.6	117.6	165.9	139.0	138.2	1214.8
1982	181.7	184.1	193.1	138.8	178.5	493.1	89.1	216.8	288.4	270.1	289.2	253.6	2215.2
1983	283.5	281.3	284.8	284.9	281.4	376.6	172.6	88.3	132.7	179.7	208.9	179.8	2549.9
1984	98.0	144.4	87.1	247.9	390.8	445.3	587.2	196.0	129.1	192.0	221.5	190.7	3889.8
1985	176.0	183.7	211.7	283.2	346.9	525.4	358.8	188.2	146.2	156.0	197.0	162.5	2799.3
1986	191.4	192.3	206.0	142.4	155.7	387.8	485.7	141.2	196.7	235.9	244.4	229.1	2584.9
1987	204.1	186.3	167.2	146.9	172.4	220.3	133.9	186.7	189.8	185.3	214.7	203.1	2161.6
1988	134.2	151.3	205.8	384.7	436.3	439.4	587.4	158.0	178.5	274.0	281.5	223.8	3246.8
1989	208.4	238.0	252.4	193.0	275.7	319.1	153.9	186.9	181.5	146.9	201.1	162.0	2401.8
1990	134.5	173.7	232.1	185.3	213.6	290.3	192.8	80.7	176.7	188.8	219.1	208.3	2095.9
1991	145.2	173.3	215.8	177.6	176.7	236.4	504.7	129.6	174.3	253.8	252.1	251.1	2516.4
1992	231.8	232.8	234.3	212.5	224.5	332.5	467.8	218.4	144.8	248.7	258.8	225.2	2995.9
1993	201.2	214.7	185.3	211.1	346.4	316.5	128.3	98.2	198.8	162.1	196.4	192.5	2392.4
1994	156.3	184.9	112.8	172.4	75.3	224.3	90.9	89.2	110.8	141.4	209.2	193.4	1676.8
1995	140.8	154.3	134.9	185.3	176.4	144.8	126.5	79.4	189.6	164.2	194.7	186.9	1728.3
1996	114.9	173.2	182.3	104.5	121.4	149.7	91.8	84.2	116.8	147.6	191.4	182.0	1541.1
1997	139.9	134.3	231.8	192.9	348.8	359.5	149.5	88.4	121.9	150.1	185.1	174.1	2252.5
1998	114.3	186.2	205.0	239.6	410.5	690.9	378.8	106.2	136.5	231.5	252.7	220.1	3085.4
1999	182.6	193.9	124.3	93.1	244.0	218.5	33.4	110.5	119.8	142.3	198.3	191.2	1689.3
2000	183.1	185.0	145.6	90.1	95.2	213.3	184.1	85.3	125.7	189.7	193.8	181.8	1715.8
2001	131.9	148.9	125.5	94.5	10.8	67.7	0.0	82.8	138.1	134.4	159.6	143.9	1209.9
2002	97.4	117.3	98.1	98.5	75.2	98.5	14.2	69.3	171.6	181.6	194.1	164.6	1322.2
2003	185.5	204.0	260.3	246.0	316.9	394.9	251.1	123.1	191.6	185.4	209.9	175.9	2632.0
2004	132.1	215.5	167.3	155.0	298.4	494.2	175.3	107.0	172.2	196.7	229.2	188.5	2516.7
2005	145.5	171.4	181.6	140.9	299.3	441.2	319.7	113.3	142.7	172.1	205.6	177.7	2480.5
2006	157.3	154.1	213.7	279.0	413.5	630.8	558.7	200.2	185.5	268.8	287.6	234.7	3514.4
2007	211.2	197.3	75.5	83.2	92.5	12.9	0.0	79.6	125.0	143.3	196.2	181.5	1299.2
2008	182.2	187.0	221.0	240.7	224.7	821.9	660.6	171.1	170.0	210.6	217.9	272.3	3418.0
2009	194.3	232.2	180.9	129.8	163.3	475.1	185.9	282.4	170.3	237.6	250.6	227.9	2654.5
2010	217.4	218.0	171.1	143.7	197.9	244.2	185.7	182.1	124.3	191.7	218.8	288.6	2182.4
2011	137.5	164.9	139.5	95.8	342.7	396.9	280.4	101.9	142.4	182.1	208.2	189.0	2313.2
2012	170.3	187.0	229.2	288.3	496.9	599.3	397.1	185.4	161.3	293.1	278.5	241.4	3433.7
2013	229.1	242.5	281.3	285.9	250.0	424.0	168.2	199.0	192.6	212.1	236.5	280.1	2786.2
2014	175.9	187.1	217.3	178.8	366.9	351.5	172.6	111.9	312.8	252.3	257.0	241.8	2626.1
2015	241.7	220.2	217.0	219.3	412.4	475.6	273.4	183.4	188.2	288.3	270.8	196.1	2916.5
2016	166.9	189.2	285.3	214.6	297.7	427.9	685.0	145.5	194.3	73.0	114.1	115.1	2790.2
AVERAGE	140.9	174.0	195.5	144.6	284.5	341.0	270.5	114.9	148.8	193.3	212.2	195.4	2372.9
10%	195.5	144.9	185.5	183.7	228.7	322.5	148.2	185.4	136.7	185.4	209.2	191.8	2401.8
20% PEACEVILLE	114.4	132.5	124.4	90.1	115.1	149.7	91.8	82.8	119.9	142.1	193.8	174.1	1676.0
50% PEACEVILLE	183.3	193.3	187.3	183.3	179.5	296.4	193.9	100.2	142.7	179.7	205.6	188.5	2215.2
80% PEACEVILLE	145.2	187.0	215.8	182.9	298.4	370.8	185.9	186.9	184.0	192.0	217.9	208.1	2584.9
90% PEACEVILLE	208.1	218.8	231.0	238.9	356.8	475.6	336.8	129.8	171.6	285.9	244.8	227.9	2916.5
MAXIMUM	231.8	242.5	281.3	300.7	496.4	821.9	660.8	218.8	312.8	293.1	289.2	253.6	3514.4
MINIMUM	97.4	103.1	75.5	83.2	10.8	12.9	0.0	69.3	108.0	132.8	139.0	138.2	1209.9

STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 78/02/16.
1985 RECOMMENDED DEVELOPMENT LEVEL

BIGHORN RIVER AT ST XAVIER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1979	178.7	175.1	175.3	137.6	113.4	113.7	114.5	129.9	139.5	165.3	168.8	172.2	1770.1
1980	103.5	131.2	97.8	59.6	61.9	98.5	33.0	57.9	111.8	166.9	180.2	139.1	1200.7
1981	101.3	105.6	130.0	181.0	120.1	116.4	119.8	159.6	163.9	169.5	168.8	167.9	1680.5
1982	285.7	287.1	287.3	174.7	185.4	215.8	210.7	164.8	168.4	173.6	172.6	171.6	2500.6
1983	235.3	233.3	233.3	232.9	230.3	285.5	585.3	174.8	178.4	183.6	182.6	181.6	2951.6
1984	284.6	285.9	285.2	254.5	263.0	313.5	368.9	157.7	161.3	166.4	165.4	164.4	2749.9
1985	215.1	215.4	215.7	120.1	116.2	111.0	429.4	216.5	220.0	225.2	224.2	223.2	2536.0
1986	209.3	250.2	250.4	137.3	110.9	110.6	101.7	177.2	180.9	186.2	185.2	184.2	2114.8
1987	236.3	237.2	237.5	260.6	259.4	320.7	585.5	204.5	208.0	213.2	212.3	211.2	3197.1
1988	209.0	209.4	209.7	141.0	145.3	147.4	192.0	162.6	166.2	171.3	170.3	169.2	2352.1
1989	221.2	221.6	221.9	125.4	111.5	110.5	134.5	172.1	175.7	181.0	180.0	179.0	2037.4
1990	205.1	205.5	205.8	127.2	110.5	110.5	240.2	219.3	222.9	228.1	227.2	226.2	2468.4
1991	285.9	286.3	286.5	135.5	138.1	180.4	505.1	224.4	227.8	233.0	232.0	230.9	2945.8
1992	274.0	274.3	274.5	167.0	171.1	200.6	166.4	157.6	161.1	166.3	165.4	164.4	2342.9
1993	194.2	194.5	194.8	127.6	113.9	113.5	108.0	118.4	126.5	157.4	147.9	122.3	1730.9
1994	169.5	170.0	170.2	127.7	111.4	111.6	116.5	115.8	123.9	154.3	145.6	121.4	1638.3
1995	154.4	154.4	155.0	127.7	113.0	112.6	107.5	119.8	127.9	158.6	149.3	183.0	1663.5
1996	196.7	197.1	197.4	178.0	192.7	214.9	187.5	150.1	153.6	158.8	157.9	156.8	1981.7
1997	214.5	214.7	215.0	282.1	292.0	344.0	372.9	198.0	201.5	206.8	205.9	204.9	2957.1
1998	229.4	229.2	229.5	129.0	112.0	110.7	102.4	134.7	138.6	151.6	143.4	134.2	1844.2
1999	199.7	200.1	200.3	127.9	113.0	113.5	108.0	118.0	125.8	155.1	145.7	121.5	1729.4
1940	174.4	174.8	180.0	129.8	114.5	116.2	77.9	71.1	127.3	135.4	160.6	144.9	1614.0
1941	97.5	117.8	98.5	93.8	71.5	72.2	2.3	57.6	143.6	173.4	195.6	165.6	1254.9
1942	133.4	133.8	133.2	160.6	158.4	192.9	289.2	176.2	179.7	184.9	183.8	182.8	2117.2
1943	226.2	226.6	226.8	191.1	195.4	232.3	213.4	185.7	189.3	194.5	193.5	192.4	2467.9
1944	227.5	228.2	228.4	196.1	201.7	238.6	357.8	169.2	172.8	177.9	176.9	175.9	2551.3
1945	236.4	237.4	237.6	404.7	515.4	378.1	596.8	226.3	229.8	234.9	233.9	232.8	3464.8
1946	220.1	220.5	220.7	126.8	114.2	116.2	29.0	67.9	119.2	154.3	187.4	182.5	1759.0
1947	183.5	183.4	183.6	232.4	239.4	286.5	698.9	196.9	200.5	205.7	204.7	203.7	2874.0
1948	262.6	263.0	263.2	137.4	110.5	110.2	164.2	224.0	228.7	228.2	233.3	232.3	231.2	2605.3
1949	260.5	261.0	261.2	127.4	110.5	110.4	111.2	172.9	176.5	181.7	180.8	179.7	2134.0
1970	204.4	204.8	204.9	159.2	142.8	191.1	236.4	171.7	175.2	180.4	179.4	178.4	2264.2
1971	282.9	283.3	283.5	320.3	332.1	397.8	435.1	272.5	226.1	231.5	230.5	229.5	3385.4
1972	319.1	319.4	319.7	173.1	177.6	204.0	200.3	199.0	202.5	207.7	206.7	205.6	2736.7
1973	252.0	252.4	252.6	179.8	191.4	213.4	210.7	242.1	245.8	251.0	249.9	248.9	2776.9
1974	291.4	291.8	292.0	234.9	287.7	294.5	311.5	180.3	183.9	189.1	188.1	187.1	2867.4
1975	257.6	258.0	258.1	191.2	195.5	232.1	685.1	127.4	130.8	144.4	139.4	119.9	2739.2
AVERAGE	219.4	219.8	219.4	159.4	155.5	184.4	254.3	162.9	173.4	185.2	184.7	180.8	2324.5
MEDIAN	220.2	220.5	220.8	181.0	180.5	144.2	206.3	171.7	175.2	180.4	180.8	179.7	2342.9
90 PERCENTILE	154.4	154.8	155.0	127.4	111.4	110.6	107.5	118.4	127.9	158.6	157.9	156.8	1729.4
80 PERCENTILE	214.3	214.7	215.0	135.5	114.5	116.2	134.5	159.6	163.9	171.3	172.6	172.2	2114.8
30 PERCENTILE	237.4	237.8	237.9	167.0	171.1	209.6	224.0	176.2	179.7	184.9	183.4	183.0	2500.6
20 PERCENTILE	261.0	261.3	261.5	232.4	239.4	285.5	372.9	204.5	208.0	213.2	212.3	211.2	2867.4
10 PERCENTILE	283.1	283.4	283.7	254.5	292.1	397.8	698.9	242.1	245.8	251.0	249.9	248.9	3464.6
MINIMUM	97.5	105.6	97.8	59.6	61.9	72.2	2.3	57.6	111.8	135.4	140.2	121.4	1200.7

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 RECOMEND DEVELOPMENT LEVEL

78/02/17.

TONGUE RIVER AT MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	8.2	9.7	34.7	17.5	0.0	54.9	0.0	0.0	0.0	19.1	7.9	8.9	163.8
1940	7.0	7.3	10.7	2.5	.3	15.0	.8	0.0	0.0	20.3	5.8	6.8	76.0
1941	6.7	6.3	6.6	2.4	11.1	43.0	0.0	0.0	14.4	32.9	35.5	19.7	178.8
1942	12.1	9.3	26.2	22.1	34.5	95.9	4.7	0.0	4.1	29.3	31.7	19.7	288.5
1943	11.9	14.9	46.8	59.8	42.5	105.9	4.7	0.0	4.1	18.3	30.2	17.7	370.6
1944	10.3	5.9	34.8	28.8	79.5	219.9	98.7	0.0	0.0	16.3	35.2	18.7	547.1
1945	12.1	9.9	26.8	20.3	18.5	123.9	42.7	0.0	6.1	40.3	31.2	16.2	345.9
1946	14.3	12.6	51.8	31.2	33.7	103.2	29.2	.4	17.5	41.4	34.4	21.8	391.3
1947	24.6	18.2	90.5	48.9	78.8	77.8	41.9	0.0	4.3	18.4	28.3	18.3	447.8
1948	14.7	15.7	48.6	82.3	50.8	70.4	61.2	1.8	.5	19.8	33.6	10.9	388.1
1949	9.3	6.1	44.3	28.7	41.8	57.9	0.0	0.0	0.0	11.6	27.4	26.2	293.9
1950	10.6	8.6	20.8	23.7	24.0	28.9	8.0	0.0	9.5	22.4	24.9	13.4	195.0
1951	12.0	12.2	13.3	13.7	21.2	23.8	17.0	6.6	23.7	21.5	32.2	11.9	210.1
1952	8.7	9.2	30.8	86.4	47.8	50.8	4.1	0.0	1.9	21.9	13.9	12.9	297.9
1953	11.3	8.9	12.7	8.0	19.1	96.1	0.0	0.0	0.0	16.8	24.1	12.4	206.4
1954	11.1	14.2	13.6	13.0	4.1	6.5	0.0	0.0	0.0	6.0	13.3	12.9	98.5
1955	9.8	9.8	15.3	28.5	43.3	61.2	13.8	0.0	0.0	3.7	8.8	9.8	199.0
1956	10.0	8.0	20.1	52.3	30.2	51.5	0.0	0.0	0.0	5.9	18.1	14.0	220.0
1957	8.3	7.6	14.1	21.4	21.2	108.4	22.5	0.0	12.3	16.6	10.5	10.3	253.1
1958	10.4	9.2	13.6	11.7	23.8	26.5	21.3	0.0	0.0	14.6	15.9	15.1	162.1
1959	12.3	10.4	20.6	31.5	17.3	12.4	0.0	3.6	6.3	8.2	10.7	13.1	218.3
1960	11.0	10.7	20.3	14.6	0.0	0.0	0.0	0.0	0.0	1.8	0.1	4.6	103.8
1961	5.0	5.4	6.4	.4	0.0	0.0	0.0	0.0	0.0	6.1	5.3	8.4	35.0
1962	8.6	15.0	34.3	34.3	41.2	118.8	12.2	0.0	8.1	15.8	12.9	10.8	311.9
1963	8.4	34.2	27.9	13.4	78.5	163.8	9.9	0.0	6.4	2.8	5.5	4.7	359.4
1964	9.0	10.3	11.6	17.8	43.4	139.6	45.8	6.8	11.7	14.0	12.4	10.8	333.2
1965	13.9	24.4	34.7	144.6	52.6	72.2	34.8	2.3	14.0	36.5	20.4	11.8	421.2
1966	9.1	7.8	15.1	8.1	4.1	4.8	0.0	0.0	1.1	2.6	5.9	6.5	65.0
1967	9.8	12.9	14.8	20.2	31.2	200.7	57.1	2.5	13.8	14.7	19.8	14.7	416.2
1968	17.5	30.4	47.5	26.5	25.5	155.4	30.8	26.4	30.7	33.5	18.9	12.3	455.4
1969	12.6	11.8	92.7	52.2	60.7	41.3	46.1	1.1	6.4	12.8	8.7	13.7	370.1
1970	13.2	14.5	26.7	15.4	47.2	153.1	21.4	0.0	7.0	16.0	17.1	12.7	404.1
1971	11.6	98.5	104.4	58.2	65.1	93.6	4.8	0.0	8.8	43.0	21.5	12.3	527.7
1972	10.3	18.2	94.8	56.4	41.4	75.7	12.7	4.7	11.0	23.3	20.4	10.4	381.3
1973	14.4	15.3	14.9	18.6	78.6	110.0	16.9	8.6	19.4	29.1	23.8	10.0	357.2
1974	25.8	19.8	14.3	20.3	41.6	70.2	14.0	5.0	4.8	14.3	18.1	19.7	271.9
1975	38.6	9.7	50.7	49.4	104.7	154.9	128.7	34.7	12.1	.0	0.0	0.0	588.7
AVERAGE	12.2	15.1	37.2	40.9	38.5	81.8	21.8	2.8	7.0	18.2	18.6	12.8	296.1
MEDIAN	10.6	10.4	26.2	22.1	33.7	72.2	12.2	0.0	4.8	16.8	18.1	12.4	293.9
80 PERCENTILE	8.6	7.8	13.6	13.0	11.1	23.8	0.0	0.0	0.0	6.1	8.4	9.6	163.8
60 PERCENTILE	10.0	9.2	15.8	20.2	25.0	55.9	4.7	0.0	1.9	14.7	13.9	11.8	220.0
40 PERCENTILE	11.8	12.6	28.9	28.7	41.6	93.4	16.9	0.0	6.4	19.1	20.4	13.1	345.9
20 PERCENTILE	13.2	18.2	49.3	48.4	60.7	116.8	33.8	2.5	12.3	29.1	30.2	17.7	391.3
MAXIMUM	25.8	98.5	104.4	100.4	87.2	219.9	98.7	26.4	30.7	43.0	35.5	26.2	547.1
MINIMUM	5.0	5.4	6.4	.4	0.0	0.0	0.0	0.0	0.0	1.8	5.3	4.6	35.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 RECOMEND DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER AT MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	361.8	257.5	460.8	401.9	807.5	1264.7	540.5	254.8	218.0	387.1	326.4	299.9	5580.9
1940	175.3	259.6	293.1	276.8	675.3	1288.8	295.1	88.8	163.8	442.3	301.8	291.5	4550.8
1941	225.1	239.7	327.3	336.4	676.1	1094.4	420.7	335.0	711.0	721.4	535.7	449.9	6072.7
1942	470.8	463.9	651.3	569.3	1030.4	1829.8	1096.3	405.1	350.7	484.2	441.2	392.1	8164.5
1943	396.4	617.6	855.2	884.4	1023.4	2603.6	2228.5	701.1	500.3	483.2	474.5	413.6	11181.8
1944	415.4	376.4	643.3	486.4	855.4	2686.3	1623.9	452.9	420.9	457.2	439.7	322.8	9180.6
1945	411.8	392.1	559.8	339.8	985.9	1737.1	1710.7	597.4	488.2	377.7	310.7	384.1	8270.8
1946	487.4	451.0	548.4	473.6	741.1	1496.1	702.8	338.1	454.2	545.3	467.4	373.3	7076.7
1947	325.4	394.5	593.7	656.8	1347.7	1806.7	1574.0	551.9	461.6	583.2	517.7	452.1	9195.3
1948	461.6	441.2	657.2	495.4	1099.1	2498.9	1139.6	453.3	298.4	434.1	444.8	277.1	8700.7
1949	285.7	342.2	630.0	501.6	1007.1	1529.5	696.1	310.1	368.5	461.1	447.3	300.7	6879.9
1950	313.1	372.7	700.1	549.9	962.7	1754.3	1598.3	687.1	519.1	651.1	553.4	493.3	8835.1
1951	460.3	470.0	686.1	497.3	964.3	1511.8	1559.0	840.4	594.2	614.0	559.4	450.2	9207.9
1952	451.5	462.1	566.4	703.4	1427.9	1828.1	904.5	489.9	378.1	417.6	386.2	333.6	8441.6
1953	406.4	358.4	421.0	324.4	467.8	1763.6	880.7	380.9	278.0	366.5	385.1	327.9	6351.9
1954	296.0	378.3	350.0	349.0	922.5	1111.8	1016.5	378.0	261.6	376.7	369.4	303.6	6113.4
1955	288.2	381.5	388.8	313.5	458.9	1343.5	680.6	276.7	226.6	373.5	323.9	399.2	5678.7
1956	339.9	328.4	563.0	559.4	1284.2	2252.2	851.1	414.6	351.9	383.4	440.5	348.6	8117.4
1957	322.9	365.4	473.3	562.1	1229.6	2764.7	1529.4	461.6	511.8	506.7	497.8	427.9	9650.4
1958	416.7	404.5	459.6	345.9	1004.3	1407.2	617.0	294.5	273.2	364.5	367.7	326.3	6280.5
1959	356.1	350.0	767.1	394.1	597.5	1898.4	909.7	307.2	297.8	464.8	408.0	372.3	7123.0
1960	386.7	342.1	425.5	378.8	462.7	1175.0	297.4	193.8	218.0	329.0	374.4	284.0	4890.8
1961	274.4	287.3	262.9	143.5	356.9	1160.7	179.8	84.1	408.0	538.2	519.4	341.4	4556.7
1962	300.4	435.2	465.9	549.7	681.3	2455.5	1264.3	530.5	479.5	504.0	437.3	392.5	8396.1
1963	384.5	558.8	477.4	413.9	1025.6	2144.1	866.5	329.7	428.6	480.6	424.9	335.4	7792.4
1964	402.2	416.1	387.7	473.3	959.1	2161.5	1643.3	487.0	428.5	411.0	423.4	382.3	8575.4
1965	510.5	491.4	591.9	865.4	1870.4	2405.3	2100.3	780.5	691.7	671.7	435.3	416.2	10970.8
1966	371.4	372.5	544.4	368.7	712.8	1034.9	401.5	187.7	225.3	344.1	397.1	402.0	5362.4
1967	342.9	330.8	354.4	435.9	930.4	2435.4	2494.8	622.6	457.7	530.8	511.5	493.7	9840.9
1968	626.5	670.7	664.6	434.4	656.5	2372.2	1486.4	713.9	681.1	625.6	545.6	438.2	9842.7
1969	523.1	482.3	835.2	502.4	1088.1	1378.6	1216.9	488.5	385.4	470.6	438.0	467.5	8336.6
1970	497.6	491.1	622.6	354.1	1217.7	2385.1	1513.1	478.7	460.2	516.2	482.9	447.1	9266.4
1971	553.0	958.1	827.2	456.0	1249.4	2434.7	1576.7	646.0	585.0	733.4	589.8	500.7	11510.0
1972	501.9	548.5	1187.3	655.1	1004.8	2072.7	1068.1	607.9	564.5	663.5	631.1	395.7	9020.3
1973	535.4	560.1	542.4	534.8	1178.3	1587.2	807.5	478.5	559.7	602.8	679.7	523.2	8568.8
1974	529.7	517.5	566.9	651.5	874.7	2605.7	1756.6	630.3	509.5	528.3	587.5	468.7	10226.9
1975	553.4	491.4	701.2	617.8	1364.5	2150.2	2698.8	851.3	463.4	0.0	0.0	0.0	9891.8
AVERAGE	402.1	429.8	562.9	508.4	920.4	1944.2	1185.8	463.8	422.6	485.1	450.7	379.2	8068.2
MEDIAN	396.4	392.1	564.4	486.4	959.1	1806.7	1068.1	453.3	428.5	470.6	441.2	392.1	8336.6
80 PERCENTILE	300.4	328.4	387.7	349.8	650.9	1288.8	617.0	294.5	270.0	383.4	385.1	322.8	6072.7
60 PERCENTILE	356.1	372.5	477.8	435.9	830.4	1587.2	880.7	380.9	370.1	457.2	437.3	372.3	7792.4
40 PERCENTILE	415.4	441.2	584.8	513.5	1004.3	2059.5	1284.3	487.0	480.2	510.2	474.5	402.0	8575.4
20 PERCENTILE	497.6	491.5	664.6	569.3	1099.1	2405.3	1598.3	622.6	519.1	602.8	535.7	450.2	9650.4
MAXIMUM	626.5	958.1	1187.3	884.4	1427.9	2764.7	2494.8	840.4	711.0	733.4	679.7	523.2	11510.0
MINIMUM	175.3	239.7	262.9	143.5	356.9	1034.9	179.8	84.1	163.8	329.8	301.0	277.1	4550.6

STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 78/02/17.
1985 RECOMEND DEVELOPMENT LEVEL

POWDER RIVER AT ARVADA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	8.4	4.0	26.3	10.5	16.3	15.7	0.0	0.0	0.0	5.2	5.3	7.3	101.9
1940	4.3	8.7	13.0	10.5	4.5	15.7	0.0	0.0	0.0	25.8	4.8	6.1	111.4
1941	5.9	6.5	11.0	66.4	74.3	19.2	41.1	45.2	9.8	17.2	14.1	11.9	321.1
1942	5.5	6.7	15.9	30.1	39.7	10.7	0.0	.8	0.0	6.7	8.3	5.9	130.2
1943	7.2	8.9	38.5	41.6	32.9	50.6	2.1	0.0	0.0	3.5	5.9	4.6	195.7
1944	3.1	3.3	8.7	33.4	92.1	86.9	15.2	0.0	0.0	6.8	7.9	7.2	264.5
1945	6.3	8.4	31.4	38.4	30.6	57.4	15.8	3.4	2.9	9.8	11.2	6.4	222.3
1946	9.6	12.0	14.4	23.5	22.1	28.9	13.0	0.0	5.6	9.2	10.2	7.9	160.4
1947	8.0	9.7	57.3	18.8	79.3	32.9	11.5	0.0	0.0	5.6	9.3	6.9	243.2
1948	5.5	12.3	52.0	13.9	24.6	70.8	15.2	0.0	0.0	8.3	8.3	5.5	217.3
1949	4.1	3.9	53.1	18.5	26.9	32.7	0.0	0.0	0.0	5.9	6.0	1.7	152.6
1950	2.7	3.0	12.5	21.6	47.0	12.5	0.0	0.0	0.0	6.5	7.2	2.7	115.2
1951	4.3	4.4	13.7	8.9	11.9	0.0	0.0	0.0	14.1	7.5	6.9	4.9	76.5
1952	2.6	5.4	14.2	21.4	68.9	8.5	1.8	0.0	0.0	1.9	4.5	3.2	130.3
1953	5.3	4.2	17.8	9.5	3.1	30.5	0.0	5.9	0.0	.8	3.5	3.7	85.6
1954	3.9	11.5	13.3	15.2	3.4	0.0	0.0	.7	0.0	.8	4.1	2.4	61.2
1955	2.7	4.2	43.3	20.9	24.0	37.0	.3	4.1	0.0	1.9	3.0	12.8	162.2
1956	6.3	6.9	38.6	14.4	15.2	9.2	0.0	0.0	0.0	.6	2.8	4.7	96.5
1957	4.0	1.9	13.1	19.2	23.5	59.0	5.8	0.0	0.0	6.4	8.5	7.1	142.4
1958	5.7	4.8	11.9	15.4	23.8	18.1	19.5	0.0	0.0	1.6	5.5	4.4	108.4
1959	4.2	3.5	21.2	10.2	23.7	18.3	3.4	0.0	0.0	2.6	2.9	4.5	94.4
1960	3.3	5.0	38.4	13.9	1.9	0.0	0.0	0.0	0.0	.8	2.3	2.1	85.3
1961	2.7	2.9	8.1	5.2	9.7	0.0	0.0	0.0	0.0	10.0	6.5	2.7	47.7
1962	2.4	25.5	14.9	20.3	119.2	191.8	40.7	7.1	7.5	23.8	10.8	9.1	477.1
1963	7.7	14.7	13.5	13.2	29.1	48.8	2.9	8.8	6.8	4.4	7.1	5.2	153.5
1964	5.9	4.3	12.5	27.4	34.1	98.0	11.7	0.0	0.0	3.0	7.0	6.3	210.1
1965	9.2	19.1	20.0	40.9	42.9	80.2	20.4	2.0	1.4	9.0	8.3	5.5	241.1
1966	4.9	5.5	20.7	16.1	13.1	2.0	0.0	0.0	3.1	3.3	6.6	4.1	79.3
1967	5.0	6.4	12.7	10.7	24.9	156.0	39.8	0.0	3.5	8.8	9.6	5.1	283.3
1968	5.0	7.5	21.5	13.7	40.1	122.7	12.6	4.7	7.4	10.8	9.1	7.4	262.5
1969	9.1	7.0	18.9	15.1	13.8	11.0	2.1	0.0	0.0	3.6	7.0	4.9	92.4
1970	8.1	9.1	18.5	17.7	43.1	45.4	4.0	0.0	0.0	3.5	8.3	8.9	177.5
1971	6.8	8.8	38.5	16.8	49.2	50.4	0.0	0.0	0.0	7.4	9.5	6.6	189.9
1972	5.6	32.6	38.2	20.9	66.8	33.3	0.0	6.4	2.8	10.8	9.3	5.1	205.9
1973	5.9	7.5	20.2	39.5	75.0	23.2	17.7	0.0	15.5	13.9	18.6	18.3	255.4
1974	15.3	11.9	17.1	39.7	18.0	4.0	0.0	0.0	0.0	6.3	8.8	6.3	127.3
1975	5.2	5.1	10.2	21.3	37.5	97.8	21.5	0.0	0.0	.6	.6	.5	206.2
AVERAGE	5.5	8.2	23.3	21.7	35.5	42.3	8.6	2.1	2.2	6.9	7.3	5.9	169.4
MEDIAN	5.3	6.7	18.0	16.8	25.9	28.9	2.1	0.0	0.0	6.3	7.1	5.5	152.6
80 PERCENTILE	3.3	3.8	12.7	12.7	13.1	8.5	0.0	0.0	0.0	1.9	4.5	3.7	92.4
60 PERCENTILE	4.8	5.5	15.9	15.1	23.7	15.1	0.0	0.0	0.0	5.2	6.6	4.9	127.3
40 PERCENTILE	5.7	7.4	20.7	20.4	32.9	37.0	4.0	0.0	0.0	8.8	8.3	6.3	177.5
20 PERCENTILE	6.6	11.5	38.5	30.1	49.2	59.0	15.2	2.0	3.5	9.8	9.3	7.2	241.1
MAXIMUM	15.3	32.6	57.3	66.8	119.2	191.8	41.1	45.2	15.5	25.8	18.6	18.3	477.1
MINIMUM	2.2	1.9	8.1	5.2	1.8	0.0	0.0	0.0	0.0	.6	2.3	1.7	47.7

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 RECOMEND DEVELOPMENT LEVEL

78/02/17.

POWDER RIVER AT LOCATE

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	9.3	4.2	125.8	23.8	23.3	46.9	1.3	0.0	0.0	3.7	4.6	6.1	249.0
1940	2.8	1.5	27.9	24.9	9.2	29.0	18.2	4.1	0.0	57.3	8.7	13.4	197.8
1941	8.4	10.5	22.0	63.4	158.7	62.2	25.9	53.3	45.6	40.0	22.5	26.2	538.7
1942	6.7	11.0	60.8	45.1	70.0	66.4	0.0	1.2	0.0	10.3	9.0	10.5	291.0
1943	12.1	213.3	152.6	69.9	46.8	139.0	25.0	.4	2.1	4.4	9.4	6.9	681.9
1944	4.5	3.0	232.0	129.5	173.3	462.2	75.9	4.3	1.0	7.2	11.0	8.9	1112.8
1945	8.8	15.4	81.0	39.3	36.1	139.7	40.1	12.6	8.4	10.4	14.8	10.3	400.7
1946	16.9	22.7	60.0	41.8	58.7	90.5	43.8	5.3	18.0	43.1	20.0	20.8	441.6
1947	16.0	37.7	198.6	67.4	129.3	93.4	37.0	0.0	0.0	8.2	10.6	10.6	604.8
1948	6.9	102.3	206.9	35.1	49.0	118.9	61.9	9.0	0.0	13.4	17.1	5.9	626.4
1949	4.9	3.5	228.9	45.5	50.4	72.4	.7	0.0	0.0	9.6	14.0	4.3	434.2
1950	.8	.1	1.5	89.3	72.7	48.0	5.8	0.0	0.0	11.6	8.1	8.9	224.4
1951	5.6	6.1	26.0	22.8	13.4	5.1	3.1	11.6	29.7	17.3	20.2	24.1	185.0
1952	5.5	11.9	103.6	108.4	82.7	37.1	9.7	0.0	0.0	3.9	6.8	6.7	376.3
1953	8.0	10.9	32.0	16.8	14.6	101.5	0.0	15.0	0.0	5.2	5.1	8.3	217.2
1954	7.8	19.6	25.0	13.5	14.8	0.0	0.0	5.4	7.4	1.2	4.5	5.8	105.0
1955	4.5	3.4	33.1	86.0	58.9	52.5	12.6	0.0	0.0	1.4	3.3	5.2	241.1
1956	7.8	4.9	73.7	27.6	32.5	33.4	0.0	0.0	0.0	1.1	4.7	7.6	193.3
1957	5.8	4.2	23.4	18.1	11.8	126.7	20.7	0.0	0.0	0.4	12.1	8.2	239.4
1958	10.1	18.2	18.0	22.1	35.9	44.5	39.7	4.5	0.0	4.6	5.8	9.3	204.7
1959	7.0	6.7	161.8	26.3	23.8	27.4	4.5	0.0	0.0	4.8	7.3	10.7	280.3
1960	7.0	8.6	124.7	26.4	0.0	0.0	0.0	0.0	0.0	.7	1.9	1.2	171.1
1961	1.7	1.9	16.0	4.2	0.0	0.0	0.0	0.0	.2	7.7	6.0	3.5	41.2
1962	2.6	76.6	51.6	39.6	125.8	254.9	106.3	12.6	5.2	29.2	17.1	10.3	731.8
1963	8.1	63.1	43.9	25.1	52.4	183.8	33.7	0.0	6.6	8.2	12.1	6.2	443.2
1964	7.8	6.8	28.4	32.3	33.5	180.8	52.3	0.0	0.0	3.2	5.4	6.2	356.7
1965	10.8	15.2	14.9	148.4	57.0	100.3	31.0	2.5	2.8	10.8	13.9	8.2	453.8
1966	8.7	7.3	29.9	24.4	13.1	0.0	0.0	0.0	0.0	5.1	5.6	6.0	100.1
1967	6.3	10.5	31.9	22.0	61.8	288.2	91.5	0.0	16.8	16.1	16.9	7.4	569.4
1968	8.9	25.8	120.3	30.6	43.0	210.0	28.7	27.2	23.4	10.4	19.4	8.6	562.3
1969	11.7	9.3	135.9	73.7	52.9	20.7	34.0	0.0	0.0	4.3	12.0	6.3	360.8
1970	7.4	14.9	56.8	32.4	102.8	123.2	11.3	0.0	0.0	8.8	13.9	7.8	374.7
1971	5.8	112.7	177.3	69.9	64.2	147.2	7.2	0.0	0.0	54.7	22.7	6.6	668.2
1972	8.3	78.4	283.7	42.1	53.8	82.7	15.5	9.8	11.8	21.0	22.3	7.2	636.6
1973	11.8	13.6	37.2	43.9	110.7	91.8	13.4	5.7	32.3	21.6	19.4	8.9	410.3
1974	28.6	32.4	45.3	54.9	51.8	32.1	3.4	.3	5.0	16.6	19.7	12.9	303.0
1975	11.4	13.1	54.3	98.9	114.8	163.2	83.0	2.3	0.0	.7	.8	.4	499.9
AVERAGE	8.2	24.8	84.4	47.3	56.2	99.3	25.3	5.1	5.8	13.6	11.6	8.8	392.7
MEDIAN	7.0	10.5	51.6	35.1	49.0	72.4	13.4	0.0	0.0	8.2	11.0	7.6	360.8
80 PERCENTILE	4.9	4.2	25.0	22.8	14.6	27.4	0.0	0.0	0.0	3.9	5.4	6.0	197.8
60 PERCENTILE	6.8	8.4	33.1	27.6	34.1	46.9	7.2	0.0	0.0	6.8	8.7	6.9	280.3
40 PERCENTILE	7.8	13.6	61.0	42.1	52.9	93.4	29.0	2.9	1.0	11.0	13.9	8.5	410.3
20 PERCENTILE	10.1	32.4	152.6	69.3	72.7	139.7	39.7	9.0	8.4	18.4	19.4	10.5	569.4
MAXIMUM	28.6	213.3	283.7	148.4	173.3	462.2	106.3	53.3	45.6	57.3	22.7	26.2	1112.8
MINIMUM	.8	.1	1.5	4.2	0.0	0.0	0.0	0.0	0.0	.7	1.5	1.2	41.2

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 RECOMEND DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER AT SIDNEY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	380.1	272.5	731.9	410.9	427.3	1205.0	485.9	189.8	162.8	367.6	349.5	310.7	5670.1
1940	167.4	270.9	917.2	330.9	431.4	1351.2	247.2	88.1	109.7	544.7	297.4	304.7	4816.4
1941	219.5	268.7	364.1	402.5	721.6	1188.3	480.4	377.9	821.5	816.0	570.8	501.4	6663.7
1942	488.6	498.8	491.3	564.5	998.9	1901.7	1034.4	348.4	304.0	482.6	495.7	347.5	8352.0
1943	410.4	876.9	1228.7	1861.7	1889.9	2488.8	2428.6	784.8	458.1	457.8	488.4	429.9	12235.4
1944	419.8	403.5	1038.7	785.6	920.1	3191.7	1685.5	429.0	364.8	467.0	454.8	324.7	10485.2
1945	425.9	408.9	780.9	398.1	560.8	1748.1	1798.7	581.3	440.4	591.0	516.5	359.0	8537.6
1946	517.6	432.0	697.0	459.1	681.5	1474.0	736.2	261.9	456.5	632.1	533.2	432.0	7314.5
1947	378.8	424.9	1189.8	781.8	1485.1	1779.8	1559.0	911.1	487.8	597.1	552.9	471.1	10051.4
1948	465.9	459.2	784.8	598.5	939.9	2712.1	1257.8	414.0	221.5	437.4	466.0	264.4	9024.7
1949	304.2	334.1	688.9	541.6	868.1	1532.1	653.3	242.6	293.6	448.6	453.6	301.5	6724.9
1950	388.8	398.8	787.1	478.9	819.8	1784.7	1488.3	813.1	458.9	819.2	804.7	484.9	8737.3
1951	475.8	471.8	557.7	885.9	771.3	1411.7	1423.8	781.7	586.4	602.0	584.1	358.1	8789.5
1952	469.8	558.6	787.1	1381.3	1388.8	1888.1	923.7	416.1	302.7	383.1	388.6	334.7	9029.8
1953	488.7	378.9	647.1	313.5	457.8	1893.8	818.9	325.2	288.8	386.1	383.8	309.7	6273.3
1954	248.8	469.6	384.4	449.6	876.8	988.7	989.4	384.2	245.7	366.3	379.3	314.8	6096.8
1955	259.6	389.8	378.8	867.8	888.8	1311.8	783.3	219.4	198.8	388.1	324.4	388.8	5863.1
1956	341.4	318.7	728.6	615.2	1128.1	2292.4	807.4	362.8	311.4	366.7	457.1	371.9	8121.7
1957	352.7	358.2	673.3	598.8	1078.8	2788.3	1488.8	391.9	432.6	498.3	488.5	424.8	9464.8
1958	415.4	357.4	584.4	388.5	847.8	1388.4	842.8	212.3	218.3	366.4	373.3	315.4	6097.5
1959	348.8	348.2	1222.4	434.5	881.3	1785.1	988.3	218.6	233.8	468.5	388.6	378.7	7261.9
1968	381.4	391.5	844.7	828.3	888.8	1881.8	883.8	218.8	148.7	318.8	378.5	281.8	6875.2
1961	293.5	291.8	327.8	145.4	218.8	1145.8	181.4	2.2	355.8	544.9	588.1	319.7	4254.5
1962	324.7	534.4	678.4	818.5	1188.3	2388.4	1553.7	511.4	438.1	544.7	473.8	422.2	9497.8
1963	388.4	474.8	647.2	448.8	1147.7	2628.6	852.8	274.1	402.6	418.7	447.3	326.7	8758.4
1964	435.1	455.4	448.5	518.9	958.1	2374.1	1811.8	473.4	438.5	416.4	437.7	343.4	9892.3
1965	518.7	588.1	988.8	1282.8	1158.8	2818.4	2531.4	847.8	627.5	783.6	453.7	448.8	12298.3
1966	423.5	428.8	688.7	347.3	682.3	984.1	348.7	137.8	169.3	378.7	412.5	436.3	5341.8
1967	338.8	348.8	422.3	518.1	881.2	2481.5	2468.7	588.4	455.1	581.5	543.6	488.1	10498.6
1968	675.8	841.7	818.8	478.4	818.7	2584.8	1488.8	478.4	785.4	657.2	688.2	498.3	10381.1
1969	551.4	511.8	1128.4	781.2	1818.4	1335.4	1387.4	412.8	324.7	488.8	478.5	492.8	8733.7
1978	512.5	555.4	588.4	428.4	1238.8	2584.8	1481.8	427.2	488.4	523.5	584.2	582.3	9852.8
1971	588.5	1868.6	1188.8	958.5	1238.4	2481.8	1842.2	587.8	571.3	884.4	631.8	468.2	12498.8
1972	513.3	637.7	1424.5	488.2	1827.8	2188.8	1837.5	555.1	535.8	683.2	668.5	438.3	10584.8
1973	583.2	578.8	677.8	818.1	1248.2	1758.7	774.8	415.8	681.8	655.1	664.5	532.2	9186.2
1974	542.8	544.8	885.8	782.1	888.5	2561.2	1785.5	575.8	494.1	572.9	622.5	588.2	10391.6
1975	548.2	488.8	885.1	748.8	1488.7	2318.8	2877.8	838.8	485.7	1.1	2.2	1.6	18852.2
AVERAGE	414.8	444.1	739.8	688.1	884.8	1447.8	1212.4	414.8	387.8	581.4	466.7	383.5	8428.8
MEDIAN	418.8	424.8	684.7	566.5	876.8	1785.1	1838.4	412.8	482.6	482.6	478.5	378.7	8758.4
88 PERCENTILE	381.4	334.1	488.5	482.8	618.8	1311.8	842.8	218.8	218.3	387.8	388.6	314.8	6896.8
68 PERCENTILE	378.8	334.8	685.8	458.8	823.3	1748.1	823.7	284.2	311.4	457.4	453.7	347.5	8121.7
48 PERCENTILE	425.8	488.4	788.8	818.2	958.1	2185.8	1888.8	427.2	432.8	544.7	488.5	429.8	9829.8
28 PERCENTILE	512.5	555.8	818.8	782.8	1128.1	2628.6	1842.2	575.8	494.1	618.2	552.9	488.1	10381.1
MAXIMUM	675.8	1868.6	1424.5	1381.3	1488.1	3191.7	2668.7	781.7	821.5	884.4	668.5	532.2	12498.8
MINIMUM	167.4	268.7	317.2	145.4	218.8	988.1	181.4	2.2	188.2	318.8	287.4	261.8	4254.5

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STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER AT LIVINGSTON

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	82.3	67.9	87.8	150.4	539.8	497.5	312.6	158.2	104.4	102.4	76.4	66.6	2246.2
1940	56.7	55.2	71.2	94.1	455.6	576.2	244.1	115.4	89.9	95.7	78.3	72.3	2004.6
1941	68.0	61.4	68.2	73.5	328.0	428.2	231.0	152.0	160.5	171.7	131.4	110.3	1984.1
1942	87.2	76.0	80.8	157.6	315.6	696.7	448.2	185.5	115.2	99.9	88.9	79.1	2450.6
1943	69.9	62.1	83.6	199.8	426.4	1101.4	818.1	311.2	171.1	128.7	102.5	85.4	3560.1
1944	74.5	68.6	71.9	78.5	295.2	591.8	380.2	170.4	120.2	114.5	94.5	73.9	2133.7
1945	65.4	52.9	65.7	72.2	256.5	664.9	581.6	245.5	169.3	147.4	118.5	93.1	2552.9
1946	88.3	74.1	89.5	200.6	396.3	695.4	324.7	162.7	115.6	114.5	97.7	84.8	2384.1
1947	86.0	82.6	77.8	96.7	539.8	793.2	584.9	267.2	172.5	150.3	116.3	98.1	2965.3
1948	83.9	77.8	80.2	99.5	581.7	1021.4	425.4	220.7	129.2	111.3	93.7	73.3	2958.0
1949	59.5	56.4	69.3	149.4	576.2	739.5	386.5	194.2	127.4	125.2	100.3	73.0	2656.8
1950	55.8	54.8	57.3	93.0	280.5	877.5	694.6	282.0	176.7	144.9	136.9	115.8	2969.7
1951	85.2	76.4	83.4	123.5	515.8	708.0	576.0	326.1	182.0	149.6	114.3	87.3	3027.5
1952	73.0	69.0	76.6	171.4	628.6	835.6	400.9	213.3	125.1	101.2	79.0	72.0	2845.6
1953	73.5	63.2	70.2	83.1	196.7	735.5	455.1	189.7	117.3	101.1	88.7	73.4	2247.4
1954	61.0	56.0	60.6	92.6	494.3	640.0	556.0	229.4	137.5	104.3	99.4	75.6	2636.6
1955	68.8	57.2	71.7	78.0	235.2	607.0	352.9	189.5	115.6	108.3	93.9	85.9	2063.9
1956	85.8	76.7	86.1	130.2	584.6	1096.4	585.6	220.7	139.2	114.7	95.8	80.4	3186.1
1957	66.7	62.1	79.3	78.4	416.2	895.9	490.0	217.8	136.4	118.1	96.0	82.8	2739.6
1958	66.9	61.0	76.2	80.1	471.8	585.5	289.8	148.0	97.6	82.1	84.3	80.6	2043.8
1959	63.8	68.7	82.4	86.1	232.2	955.0	468.5	194.2	124.5	129.8	101.9	91.1	2558.1
1960	80.0	71.7	91.8	114.4	263.5	629.2	244.4	142.8	95.4	94.4	87.7	75.7	1990.9
1961	65.7	60.9	69.4	70.2	259.3	617.1	217.8	120.6	117.0	140.5	120.0	93.9	1952.3
1962	84.0	86.3	91.8	175.7	587.1	906.1	537.9	252.4	144.8	124.2	108.5	96.4	3115.1
1963	86.1	80.0	78.2	83.1	416.0	857.0	412.9	187.9	132.9	114.4	99.9	83.4	2611.7
1964	85.5	85.9	86.0	86.7	362.3	875.6	629.4	253.9	148.7	117.4	102.2	90.9	2842.4
1965	86.3	74.1	81.7	116.9	359.9	1160.1	783.9	323.5	199.9	174.8	129.6	101.8	3592.4
1966	82.0	66.6	81.3	106.6	418.2	530.0	281.5	147.9	110.6	103.6	87.4	77.9	2093.5
1967	75.0	72.0	82.6	84.6	389.7	1122.1	778.5	274.2	151.7	141.7	114.1	93.1	3359.2
1968	90.4	82.3	93.1	96.2	278.5	1039.1	606.0	317.0	230.7	183.1	136.0	106.6	3238.9
1969	88.1	92.0	98.5	145.5	673.9	705.1	488.3	213.7	127.5	123.2	104.1	90.0	2969.8
1970	80.5	75.8	83.3	81.5	409.6	1089.0	599.9	241.1	173.4	147.1	117.7	102.1	3200.5
1971	90.8	91.4	97.1	110.1	482.6	1213.0	805.2	314.5	191.6	162.3	129.5	99.2	3787.2
1972	88.2	81.8	103.8	117.1	424.0	1185.3	559.4	260.0	199.3	191.6	140.7	110.4	3461.7
1973	100.4	86.3	90.8	88.0	355.8	666.6	347.1	183.0	133.2	126.5	112.9	93.1	2382.8
1974	73.8	68.3	82.8	133.1	578.0	1338.1	736.6	292.8	159.2	137.3	104.5	87.8	3592.2
1975	69.8	63.6	83.3	84.2	203.4	819.3	914.0	308.7	178.0	.2	.8	.6	2726.4
AVERAGE	75.1	68.9	79.3	110.8	401.3	822.6	497.5	222.9	143.3	124.8	102.0	85.4	2733.8
MEDIAN	73.8	68.3	80.2	96.2	409.6	739.5	468.5	213.7	132.9	123.2	101.9	85.9	2656.8
80 PERCENTILE	85.5	76.4	89.3	80.1	263.5	607.0	312.6	158.2	115.6	102.4	88.7	73.9	2093.5
60 PERCENTILE	88.8	82.6	76.6	88.0	342.3	696.7	412.9	189.7	127.4	114.5	96.0	82.8	2552.9
40 PERCENTILE	80.4	72.0	82.6	110.1	424.0	875.6	537.9	229.4	144.8	128.7	104.5	90.9	2958.0
20 PERCENTILE	85.5	77.6	89.5	149.4	515.8	1049.0	606.0	274.2	172.5	149.6	118.5	98.1	3200.5
MAXIMUM	100.4	92.0	103.8	200.6	673.9	1338.1	818.1	326.1	220.7	191.8	140.7	115.8	3787.2
MINIMUM	55.8	68.7	56.0	70.2	196.7	428.2	217.8	115.4	89.9	82.1	76.4	66.6	1952.3

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL

78/02/17.

STILLWATER RIVER AT ABSAROKEE

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	19.6	11.7	17.0	20.0	96.7	91.5	60.5	26.0	15.7	18.0	15.0	12.1	403.7
1940	13.2	12.2	11.1	18.1	101.5	204.3	71.0	25.2	24.5	27.4	18.6	16.1	543.1
1941	18.7	11.3	13.2	15.8	86.8	149.2	89.7	52.5	44.7	52.6	30.3	25.2	630.9
1942	25.5	15.2	15.7	30.7	102.0	208.8	201.0	50.5	30.2	32.3	25.9	22.6	760.3
1943	19.6	18.5	28.6	70.5	109.0	249.6	271.3	81.9	52.2	35.3	25.8	20.9	1023.1
1944	13.6	10.1	15.9	18.3	105.0	280.5	220.2	60.8	45.1	33.2	25.8	20.9	849.3
1945	18.3	15.1	18.2	23.0	60.6	211.6	225.2	73.9	43.0	30.6	25.4	19.9	764.7
1946	19.0	15.4	19.6	29.6	60.4	172.4	115.8	39.6	32.7	31.8	24.0	20.5	580.7
1947	19.6	15.2	25.1	34.4	125.6	195.5	192.3	62.3	44.3	43.0	27.5	21.7	796.4
1948	17.2	17.7	21.2	26.5	119.5	274.2	131.0	65.2	28.4	25.8	22.0	18.8	747.4
1949	15.2	10.4	16.1	27.9	113.3	171.8	96.8	37.7	33.0	29.3	22.0	16.5	589.9
1950	11.2	13.8	16.8	20.1	51.7	207.5	187.6	62.9	45.4	38.3	30.0	23.3	708.5
1951	20.8	18.4	19.9	25.9	95.6	137.7	178.9	84.4	58.6	34.6	25.4	19.0	699.1
1952	16.2	14.3	17.5	40.4	138.0	225.0	135.0	71.6	35.1	24.9	22.3	19.4	759.6
1953	17.6	15.1	15.3	19.7	45.9	180.0	136.6	55.5	28.6	21.3	20.7	18.2	574.4
1954	13.8	15.7	18.1	20.0	97.5	125.4	156.6	44.3	23.7	26.1	22.7	16.0	579.8
1955	12.9	12.0	12.7	21.8	47.1	148.8	97.1	36.3	21.7	23.0	18.5	19.0	470.8
1956	17.6	14.5	22.1	26.2	140.3	232.9	106.6	53.1	28.0	23.9	22.2	22.9	710.2
1957	13.4	12.2	14.3	19.4	139.6	342.2	226.9	58.0	40.9	32.9	28.9	24.1	952.7
1958	19.9	16.5	16.3	19.5	146.8	171.1	85.6	51.2	32.5	25.5	24.3	22.7	631.8
1959	18.6	15.1	19.4	24.2	56.6	266.6	128.4	43.6	26.5	31.9	28.1	21.9	680.8
1960	18.2	13.1	13.5	13.3	39.3	148.5	56.4	32.6	18.4	21.5	19.9	17.8	412.4
1961	15.1	14.3	12.6	8.6	55.4	148.9	46.4	27.6	44.9	41.5	32.5	26.6	474.3
1962	20.7	22.4	19.1	33.5	74.8	236.1	152.4	71.1	45.6	37.6	25.0	21.0	759.2
1963	18.4	19.9	15.0	20.3	99.8	265.8	119.2	43.5	41.0	29.5	23.9	17.9	714.1
1964	16.4	15.0	14.5	17.8	69.4	202.4	175.2	42.3	23.3	20.7	23.4	22.9	643.2
1965	20.4	18.5	16.4	25.0	58.0	244.9	204.9	77.9	48.4	39.0	25.6	21.3	800.2
1966	18.5	16.6	18.2	27.4	104.6	137.6	88.4	43.0	29.4	31.4	22.5	19.0	556.5
1967	19.6	15.2	21.0	15.7	73.0	325.0	272.0	63.4	41.1	47.6	29.5	19.3	942.3
1968	19.8	19.2	27.0	21.0	53.7	250.2	168.7	87.0	53.4	39.7	25.6	21.1	786.3
1969	19.9	18.3	18.4	25.5	96.8	172.3	159.9	50.5	25.8	26.6	23.9	18.4	656.2
1970	14.3	14.5	13.4	18.5	120.2	332.7	159.3	50.2	32.4	35.6	26.2	22.7	859.9
1971	22.9	21.6	17.9	27.6	94.5	241.9	187.2	70.8	63.7	44.9	31.8	23.0	887.7
1972	18.9	25.9	34.0	24.9	84.8	238.3	127.2	88.4	63.6	43.7	29.3	22.9	801.8
1973	17.6	16.4	18.2	39.1	112.9	207.5	130.7	47.3	34.1	33.2	24.9	21.2	723.0
1974	20.1	16.0	20.0	28.8	63.4	342.5	225.7	74.8	42.8	33.2	26.4	17.6	911.2
1975	16.1	11.8	18.4	36.2	118.0	271.4	405.7	86.5	35.3	0.0	0.0	0.0	999.3
AVERAGE	17.8	15.6	18.1	25.3	90.8	219.0	156.6	56.5	38.3	31.6	24.2	19.8	713.7
MEDIAN	18.4	15.2	17.5	25.0	95.6	207.5	136.6	52.5	38.6	31.9	25.0	20.9	710.2
80 PERCENTTLE	14.3	12.2	14.3	18.3	56.6	148.9	89.7	39.6	25.8	24.9	22.0	17.9	574.4
60 PERCENTTLE	17.6	15.0	16.3	20.1	74.9	195.5	128.4	50.2	32.5	29.5	23.9	19.3	656.2
40 PERCENTILE	18.9	15.7	18.2	25.5	99.8	232.9	159.9	60.8	42.8	33.2	25.6	21.2	759.6
20 PERCENTTLE	19.9	18.4	20.0	28.8	113.3	274.2	201.0	71.6	48.4	39.0	28.1	22.9	801.8
MAXIMUM	25.5	25.9	34.0	70.5	146.8	342.5	272.0	88.4	64.7	52.6	32.5	26.6	1023.1
MINIMUM	11.2	10.1	11.1	8.6	39.3	91.5	46.4	25.2	15.7	18.0	15.0	12.1	403.7

STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 78/02/17.
2000 RECOMEND DEVELOPMENT LEVEL

CLARKS FORK OF YELLOWSTONE AT EDGAR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	24.1	16.4	25.7	35.4	160.1	161.1	76.4	11.9	9.3	22.3	21.4	18.6	583.7
1940	14.3	17.7	20.2	26.0	142.1	184.5	31.0	0.0	13.2	34.4	27.0	26.8	537.2
1941	21.1	17.3	17.1	22.0	117.0	166.9	48.1	30.2	77.2	62.1	39.1	30.8	648.9
1942	24.0	18.6	23.7	41.8	95.9	191.1	128.4	13.5	17.8	30.7	33.2	31.1	649.8
1943	23.9	22.8	34.6	82.7	124.3	322.4	278.8	69.9	39.7	32.4	33.4	27.8	1092.7
1944	22.8	20.5	20.6	19.4	100.5	235.0	132.4	19.3	29.3	30.4	28.5	24.2	642.9
1945	23.9	19.2	23.2	20.4	71.4	239.6	211.4	55.8	29.8	35.4	34.2	27.8	792.1
1946	28.7	21.8	25.2	36.2	92.3	208.1	96.3	18.1	21.0	33.1	30.9	27.5	659.2
1947	20.7	20.6	33.3	28.2	163.7	196.4	137.7	35.1	19.5	35.3	33.1	28.4	792.0
1948	24.6	27.4	25.2	25.7	154.1	293.1	73.3	21.7	14.5	22.4	25.4	21.8	729.2
1949	17.7	17.0	28.2	36.0	158.6	234.9	79.8	10.0	21.8	33.6	30.5	30.4	698.5
1950	23.6	21.6	23.6	27.5	67.6	246.8	222.8	53.3	41.3	55.1	44.8	37.5	885.5
1951	29.6	29.0	31.2	33.5	160.2	199.1	212.3	84.3	37.3	45.6	38.1	26.9	927.1
1952	28.7	28.1	25.6	49.6	146.8	232.5	85.5	40.8	18.0	23.0	26.8	29.7	735.1
1953	29.1	19.9	21.0	24.7	99.2	283.8	125.7	30.0	14.8	18.7	28.7	28.6	634.2
1954	25.3	23.4	22.9	28.6	163.8	179.6	165.4	24.5	17.3	24.2	26.0	27.5	728.5
1955	26.3	23.1	25.5	27.1	84.3	195.2	76.5	13.0	8.3	18.4	27.5	29.4	532.6
1956	22.1	22.5	32.2	38.1	179.6	344.1	112.8	36.9	21.9	21.7	33.0	26.7	891.6
1957	21.7	27.5	25.8	24.1	150.9	346.1	161.0	29.3	33.2	36.7	37.0	31.3	924.6
1958	26.9	21.3	21.6	23.5	187.0	199.9	81.4	22.9	19.5	20.5	30.7	31.2	646.4
1959	24.5	21.7	25.0	29.7	52.5	346.5	136.5	27.7	19.1	41.4	36.3	28.7	789.6
1960	20.1	19.3	28.9	29.6	58.5	216.5	27.4	14.0	5.7	20.7	27.6	24.7	493.0
1961	23.1	19.4	19.0	6.6	83.6	238.4	26.4	3.0	50.8	89.9	35.8	27.1	583.1
1962	20.2	22.7	22.5	52.4	105.0	287.1	117.0	45.5	31.0	33.3	30.8	30.5	798.0
1963	21.4	33.0	25.0	25.0	137.4	285.2	87.9	9.2	31.9	24.7	29.3	24.6	732.6
1964	19.2	18.4	19.9	29.2	115.5	260.3	179.3	19.6	13.0	21.8	31.9	29.1	757.2
1965	27.9	23.9	20.1	34.6	91.9	339.2	199.6	46.6	44.0	45.3	34.9	31.0	959.0
1966	24.5	19.2	23.5	24.1	111.4	167.3	57.6	14.8	20.3	28.4	29.7	27.2	548.1
1967	26.7	21.6	22.1	20.4	109.3	376.5	232.0	41.1	23.9	42.4	37.0	28.9	981.9
1968	26.4	24.3	26.2	21.2	83.6	279.4	120.4	75.0	42.0	37.7	31.9	26.2	752.3
1969	24.7	22.2	22.5	39.7	137.1	193.2	91.1	11.8	12.1	30.1	30.9	28.0	643.4
1970	24.3	22.7	22.0	20.2	136.0	306.1	115.9	17.2	34.5	37.9	31.6	28.3	796.7
1971	24.3	25.3	25.3	28.8	125.1	359.4	178.4	54.6	52.2	51.0	38.3	31.2	993.9
1972	29.5	28.8	37.2	27.6	111.0	378.3	134.4	67.7	51.3	58.2	41.0	29.6	994.6
1973	28.4	25.9	24.8	32.9	100.2	187.0	84.0	21.1	47.5	36.3	37.3	25.5	650.9
1974	30.8	22.3	25.2	38.4	97.1	393.8	180.2	53.9	31.9	29.9	34.3	27.9	965.7
1975	18.5	19.8	32.2	30.0	98.6	253.5	334.5	61.2	26.8	.0	1.0	.8	876.9
AVERAGE	24.1	22.3	25.1	31.4	115.2	256.9	129.7	33.0	28.2	33.1	31.6	27.4	758.1
MEDIAN	24.3	21.8	23.7	28.2	111.4	238.4	117.0	24.5	21.9	33.1	31.9	28.0	732.6
80 PERCENTILE	21.1	19.2	21.0	22.0	71.4	191.1	73.3	13.0	14.5	22.3	27.6	26.2	634.2
60 PERCENTILE	23.9	21.3	23.0	26.0	100.5	216.5	91.1	19.6	19.5	30.1	30.8	27.5	682.9
40 PERCENTILE	24.6	22.7	25.2	29.6	125.1	266.6	132.4	30.2	31.0	35.3	33.2	28.7	757.2
20 PERCENTILE	27.9	25.3	26.7	38.1	154.1	339.2	179.3	53.9	41.3	42.4	37.0	30.5	924.6
MAXIMUM	30.8	33.0	37.2	82.7	187.0	393.8	278.8	84.3	77.2	62.1	44.8	37.5	1092.7
MINIMUM	14.3	16.4	17.1	6.6	83.6	141.1	26.4	0.0	5.7	18.4	21.4	18.6	493.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL

76/02/17.

YELLOWSTONE RIVER AT BILLINGS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	136.3	103.7	214.1	254.8	846.0	941.3	420.3	151.7	113.9	170.8	153.6	134.2	3640.7
1940	86.9	105.8	137.3	149.5	704.2	1106.3	288.1	75.3	103.8	207.3	163.8	136.3	3284.6
1941	116.3	113.2	130.6	158.9	551.7	900.0	321.7	195.8	380.9	422.0	287.4	222.4	3800.9
1942	182.2	151.1	243.7	349.5	789.5	1451.9	843.5	236.9	191.9	232.2	230.9	208.0	5111.3
1943	162.2	223.9	331.2	521.5	784.8	2186.1	1585.4	463.9	300.8	249.4	231.1	193.3	7233.6
1944	164.4	140.7	179.2	146.2	511.8	1696.9	981.3	235.7	235.0	233.0	211.2	185.0	4880.4
1945	161.0	127.5	166.8	157.7	454.6	1474.6	1183.2	374.0	245.4	242.9	243.1	170.7	5021.5
1946	200.5	188.3	198.0	329.3	631.0	1225.6	576.5	180.1	200.5	271.6	217.5	182.1	4401.0
1947	163.2	128.2	195.5	272.8	1037.7	1479.7	960.2	358.6	259.3	299.9	243.4	207.0	5605.5
1948	165.6	156.9	200.3	232.8	1030.8	2131.9	714.7	292.4	165.0	208.7	192.7	136.6	5628.4
1949	121.5	133.5	182.9	298.9	940.1	1318.9	523.2	177.8	194.5	244.6	209.2	126.2	4461.3
1950	90.2	117.4	194.8	206.4	525.1	1629.1	1271.4	437.4	279.4	331.9	295.9	251.6	5630.6
1951	175.2	199.1	232.5	270.1	892.4	1220.4	1054.4	551.0	293.3	317.1	271.2	186.4	5663.1
1952	165.1	158.7	187.9	407.6	1229.5	1601.4	689.5	330.7	196.6	192.2	182.3	168.6	5510.1
1953	173.8	181.4	150.6	164.9	325.0	1454.3	790.6	280.2	165.0	173.4	193.4	175.3	4187.9
1954	123.8	150.9	140.3	197.5	841.9	1069.4	902.0	276.4	147.4	189.5	190.8	161.5	4411.4
1955	136.2	115.2	144.0	235.1	449.4	1183.0	569.9	205.9	176.1	187.1	173.0	174.4	3709.3
1956	162.5	186.1	251.2	308.6	1206.7	1902.4	696.8	299.2	196.7	190.3	214.0	179.1	5793.6
1957	102.5	143.7	187.7	146.1	959.1	2233.7	1036.5	285.8	260.6	263.5	238.8	195.7	6093.7
1958	154.4	135.5	159.8	179.3	952.0	1139.4	420.3	193.7	151.9	149.3	201.2	178.9	4025.7
1959	142.6	125.6	179.6	214.4	497.3	1940.5	849.1	239.8	180.8	269.4	234.4	195.6	5069.1
1960	120.1	139.9	179.2	208.2	396.7	1162.9	307.5	169.2	116.9	144.9	184.9	153.3	3303.7
1961	137.4	133.9	125.8	84.0	418.5	1106.1	249.0	96.8	261.5	309.0	276.1	197.6	3395.7
1962	147.2	222.3	215.5	357.8	801.2	1720.2	874.7	380.4	279.4	248.2	219.5	188.8	5655.2
1963	134.7	229.3	164.2	181.7	773.7	1782.0	644.8	206.5	223.7	200.3	203.7	155.7	4900.3
1964	147.4	153.1	150.2	200.9	699.0	1707.8	1113.8	318.4	206.2	189.6	207.8	188.4	5282.6
1965	211.5	186.2	174.5	304.8	680.7	2076.9	1428.7	540.5	387.0	356.0	258.4	202.4	6807.6
1966	182.9	172.4	204.3	235.4	805.6	958.9	436.3	184.5	179.7	213.2	219.3	194.5	3987.0
1967	191.8	165.1	197.5	184.8	673.7	2435.0	1569.4	375.0	296.2	300.5	253.1	198.4	6770.5
1968	166.5	223.3	229.3	219.1	465.9	2022.2	1102.4	541.6	412.3	341.1	278.2	203.5	6204.4
1969	180.5	181.0	226.8	361.6	964.5	1315.2	911.9	257.3	181.9	252.5	228.5	191.8	5253.5
1970	158.1	160.8	169.6	182.2	1005.6	2164.2	990.6	303.7	327.0	302.6	242.2	193.0	6198.6
1971	191.5	228.0	197.2	282.9	890.1	2206.2	1267.6	432.3	375.4	349.3	273.6	204.0	6898.1
1972	164.4	199.9	302.6	234.0	709.5	1947.6	842.1	452.1	377.6	391.1	288.7	203.6	6113.2
1973	194.2	172.5	203.0	289.8	849.3	1245.7	612.7	223.4	307.5	265.3	247.0	202.1	4812.5
1974	192.3	148.5	179.9	274.8	607.9	2427.4	1291.2	466.1	283.6	257.6	248.8	184.3	6562.9
1975	152.0	124.6	215.2	306.0	903.1	1944.8	2251.8	528.5	280.0	0.0	2.9	2.2	6711.2
AVERAGE	155.7	158.0	193.0	247.5	751.5	1608.1	880.4	305.9	239.1	249.3	221.9	178.2	5188.7
MEDIAN	162.2	150.9	187.7	232.8	773.7	1479.7	843.5	280.2	223.7	249.4	228.5	188.4	5111.3
80 PERCENTILE	123.8	127.5	150.6	179.3	497.3	1129.4	436.3	184.5	165.0	189.6	192.7	155.7	3987.0
60 PERCENTILE	147.4	141.4	179.2	206.4	680.7	1318.9	696.8	236.9	196.6	232.2	214.0	179.1	4880.4
40 PERCENTILE	164.4	158.7	197.2	254.8	805.6	1707.8	911.9	303.7	259.3	263.5	238.8	193.3	5605.5
20 PERCENTILE	182.2	188.3	215.5	304.8	952.0	2076.9	1113.8	432.3	300.8	309.0	258.4	202.4	6113.2
MAXIMUM	211.5	229.3	331.2	521.5	1229.5	2435.0	1585.4	551.0	412.3	422.0	295.9	251.6	7233.6
MINIMUM	86.9	103.7	125.8	84.0	325.0	900.0	249.0	75.3	103.8	144.9	153.6	126.2	3284.6

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMENDED DEVELOPMENT LEVEL

78/02/16.

INFLOW BOYSEN RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	39.7	30.8	37.2	53.3	86.7	62.5	0.0	0.0	31.3	47.7	36.8	32.5	478.4
1940	30.6	28.1	36.8	27.0	43.3	11.2	0.0	0.0	60.5	44.7	33.5	40.5	376.1
1941	37.6	26.3	45.0	64.9	179.3	204.7	30.2	90.6	60.5	129.2	69.3	54.5	994.0
1942	46.1	42.9	59.8	89.1	183.1	235.2	110.8	0.0	30.2	65.7	60.5	48.4	971.7
1943	52.6	50.8	71.2	133.5	188.8	354.6	285.8	62.6	45.1	66.0	57.5	46.0	1414.4
1944	35.8	38.7	46.8	71.7	222.1	457.7	174.6	0.0	14.8	67.0	47.8	41.0	1217.9
1945	44.8	38.7	56.4	60.6	125.6	266.5	230.7	50.9	65.1	100.0	52.6	43.0	1134.8
1946	46.9	45.1	58.6	75.4	85.7	206.0	67.9	0.0	51.1	96.0	58.1	46.1	836.8
1947	37.7	41.0	58.4	62.3	287.1	470.0	316.5	92.2	43.4	92.6	70.3	50.4	1621.8
1948	52.1	58.6	73.6	70.7	146.8	295.7	70.0	5.4	39.3	63.1	48.9	45.6	967.7
1949	38.3	41.1	64.8	69.9	187.3	263.9	81.2	6.1	89.1	97.8	73.1	46.5	1019.0
1950	42.8	46.4	54.6	57.1	102.1	359.6	254.5	83.2	85.6	112.2	75.9	54.6	1288.5
1951	47.7	54.2	63.4	67.4	223.7	353.1	251.3	106.7	53.4	132.6	61.9	44.8	1460.1
1952	47.7	45.8	46.4	106.1	224.4	285.0	77.5	43.2	32.6	60.9	46.2	48.0	1061.7
1953	51.4	40.6	42.4	47.3	57.7	264.5	42.9	28.6	21.1	60.9	59.8	48.0	765.1
1954	51.3	46.5	48.1	42.4	196.2	120.4	121.4	25.3	29.1	41.7	48.8	38.5	809.6
1955	38.5	27.8	31.6	44.7	65.8	132.9	33.0	8.9	16.8	59.1	44.5	57.3	560.8
1956	49.5	34.2	61.0	56.1	220.8	393.0	107.7	37.2	29.3	57.6	50.7	42.7	1139.7
1957	36.5	35.2	43.2	55.5	183.9	502.5	305.4	45.2	58.4	115.6	69.5	58.5	1529.3
1958	48.8	51.3	52.5	50.6	297.7	127.6	11.6	29.1	23.0	54.6	50.6	47.1	844.4
1959	38.8	40.3	62.9	46.9	46.1	208.2	25.3	21.1	19.9	72.5	52.2	42.6	676.7
1960	36.1	28.6	52.8	52.7	26.7	53.8	0.0	0.0	15.0	68.1	52.3	36.9	422.9
1961	28.6	30.5	32.6	22.2	78.8	189.9	0.0	4.9	31.4	76.2	56.9	38.5	590.4
1962	40.9	44.5	43.6	89.6	130.3	353.8	137.7	31.5	40.3	66.8	50.1	40.9	1122.1
1963	30.8	41.6	46.3	46.7	86.8	418.8	92.7	31.3	70.4	66.9	48.8	38.9	1019.9
1964	37.7	32.6	40.1	56.0	114.1	307.7	186.9	14.5	19.4	61.5	40.6	38.4	949.4
1965	45.6	39.0	41.8	82.1	100.1	512.2	364.9	98.8	68.5	108.0	72.3	55.2	1588.4
1966	31.7	38.8	57.1	51.3	73.2	56.9	15.1	20.5	44.2	74.9	50.7	42.5	556.8
1967	38.6	39.4	54.6	83.6	159.0	593.7	409.8	44.0	53.5	90.9	68.6	53.0	1648.6
1968	36.9	48.2	75.1	54.5	76.7	331.4	75.2	75.9	53.8	93.2	87.4	53.4	1061.6
1969	46.1	38.9	58.4	69.7	148.9	272.2	79.9	26.3	37.2	69.6	52.6	42.6	942.3
1970	35.7	35.6	35.6	42.8	123.0	282.7	47.5	14.5	29.5	56.0	53.6	37.3	773.7
1971	36.3	45.8	37.5	51.4	181.8	624.6	208.6	56.0	74.6	100.4	66.8	57.4	1581.1
1972	52.0	76.7	77.4	59.1	148.0	442.9	121.6	69.2	53.4	83.3	60.0	43.5	1327.0
1973	39.9	33.6	53.4	118.8	250.1	160.2	119.7	43.2	176.9	107.2	80.8	52.2	1235.9
1974	40.3	41.0	71.7	84.9	157.9	405.6	144.7	51.5	50.8	71.6	53.8	37.8	1211.5
1975	36.8	32.4	56.5	45.2	114.1	244.1	388.0	67.8	49.2	4.4	3.8	3.1	1045.3
AVERAGE	41.3	43.5	53.2	62.8	144.9	292.0	135.5	36.9	46.6	77.8	55.8	44.5	1034.8
MEDIAN	39.7	40.3	53.4	56.1	146.8	272.2	92.7	29.1	43.4	69.6	53.6	43.6	1019.0
80 PERCENTILE	36.1	32.6	41.8	46.7	76.7	132.9	25.3	4.9	23.0	60.9	48.8	38.5	676.7
60 PERCENTILE	38.3	38.8	46.8	53.3	114.1	282.7	75.2	21.1	32.6	66.9	52.2	42.6	949.4
40 PERCENTILE	42.3	41.1	57.1	62.3	179.3	331.4	121.4	43.2	50.8	76.2	58.1	46.5	1122.1
20 PERCENTILE	47.7	48.2	62.9	75.4	196.2	418.8	230.7	62.6	60.5	100.0	69.3	53.0	1327.0
MAXIMUM	52.6	94.5	77.4	133.5	297.7	624.6	409.8	106.7	176.9	132.6	87.4	58.5	1648.6
MINIMUM	28.6	27.8	31.6	22.2	26.7	11.2	0.0	0.0	14.8	44.7	33.5	32.5	576.1

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMENDED DEVELOPMENT LEVEL

76/02/16.

WIND RIVER AT BOYSEN

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	54.7	54.7	1.2	.7	0.0	0.0	0.0	72.0	72.0	54.0	53.0	51.9	424.2
1940	52.4	52.4	0.0	0.0	0.0	0.0	0.0	72.0	72.0	35.9	34.9	33.9	353.6
1941	34.5	34.5	58.6	58.2	57.2	71.8	30.2	90.6	72.0	120.4	119.2	118.0	845.1
1942	118.4	118.4	75.5	75.1	74.2	72.1	64.9	72.0	72.0	77.1	76.0	75.0	970.6
1943	75.4	75.4	135.0	161.9	161.0	159.1	152.7	72.0	72.0	90.9	89.8	88.6	1333.9
1944	89.1	89.1	135.0	140.3	139.5	137.7	131.1	72.0	72.0	66.6	65.5	64.5	1202.2
1945	65.0	65.0	97.7	97.3	96.4	94.5	88.0	72.0	72.0	102.3	101.1	100.0	1051.3
1946	100.4	100.4	42.7	42.3	41.3	39.1	31.7	72.0	72.0	85.0	83.8	82.7	793.4
1947	83.2	83.2	135.0	197.6	196.8	195.1	188.8	92.2	72.0	107.8	106.6	105.5	1564.0
1948	105.9	105.9	76.9	76.5	75.6	73.4	66.1	72.0	72.0	72.3	71.2	70.2	938.0
1949	70.6	70.6	82.5	82.1	81.2	79.0	71.6	72.0	72.0	91.5	90.4	89.3	952.8
1950	89.7	89.7	111.9	111.5	110.7	108.9	102.8	72.0	85.6	114.1	112.9	111.8	1221.8
1951	112.2	112.2	135.0	134.8	134.0	132.3	125.9	106.7	72.0	115.7	114.5	113.3	1408.7
1952	113.7	113.7	88.9	88.5	87.6	86.0	77.5	72.0	72.0	83.2	82.0	80.9	1046.2
1953	81.4	81.4	37.8	37.4	36.4	34.3	27.1	72.0	72.0	80.1	79.0	77.9	716.8
1954	78.4	78.4	54.3	53.9	53.0	50.7	43.4	72.0	72.0	73.2	72.1	71.0	772.4
1955	71.5	71.5	7.9	7.5	6.5	4.1	0.0	72.0	72.0	70.9	69.9	68.8	522.5
1956	69.3	69.3	113.7	113.3	112.4	110.2	103.4	72.0	72.0	76.1	75.0	73.9	1071.0
1957	74.4	74.4	135.0	172.5	171.7	170.1	164.2	72.0	72.0	116.7	115.5	114.3	1452.5
1958	114.7	114.7	50.3	49.9	49.0	73.6	11.6	72.0	72.0	73.4	72.3	71.2	824.9
1959	71.7	71.7	26.6	26.2	25.2	22.9	15.4	72.0	72.0	73.8	72.7	71.6	621.7
1960	72.0	72.0	0.0	0.0	0.0	0.0	0.0	72.0	72.0	38.7	37.7	36.7	401.3
1961	37.3	37.3	18.3	17.9	16.9	21.6	0.0	72.0	72.0	74.9	73.8	72.7	514.7
1962	73.2	73.2	110.3	109.9	108.9	106.9	99.9	72.0	72.0	78.3	77.1	76.0	1057.7
1963	76.5	76.5	86.3	85.9	85.0	83.1	76.3	72.0	72.0	86.1	84.9	83.8	968.4
1964	84.3	84.3	85.6	85.2	84.4	82.5	76.0	72.0	72.0	67.8	66.7	65.6	926.4
1965	66.1	66.1	135.0	178.1	177.3	175.7	170.2	98.8	72.0	114.6	113.4	112.2	1479.7
1966	112.6	112.6	0.0	0.0	0.0	0.0	0.0	72.0	72.0	65.4	64.3	63.3	562.1
1967	63.8	63.8	135.0	218.7	84.9	302.8	296.2	72.0	72.0	99.4	98.2	97.1	1563.8
1968	97.5	97.5	67.7	67.3	66.4	64.3	57.3	75.9	72.0	114.0	112.8	111.6	1004.4
1969	112.0	112.0	66.2	65.8	64.9	62.8	55.6	72.0	72.0	78.7	77.5	76.4	916.0
1970	76.9	76.9	49.1	48.7	47.7	45.6	38.4	72.0	72.0	69.5	68.4	67.3	732.4
1971	67.8	67.8	135.0	190.1	189.2	187.5	181.1	72.0	74.6	113.7	112.5	111.3	1502.7
1972	111.8	111.8	125.8	125.4	124.5	122.6	115.7	72.0	72.0	99.8	98.6	97.5	1277.6
1973	97.9	97.9	82.6	82.2	81.3	79.0	71.5	72.0	176.9	111.5	110.3	109.2	1172.3
1974	109.6	109.6	114.3	113.9	113.0	111.1	104.4	72.0	72.0	88.2	87.0	85.9	1180.8
1975	96.3	96.3	117.8	117.4	116.6	114.9	109.4	72.0	72.0	85.4	84.2	83.1	1025.5
AVERAGE	83.2	83.2	79.3	87.5	82.0	88.6	79.7	74.8	75.3	84.5	83.4	82.3	983.6
MEDIAN	76.9	76.9	82.5	82.1	75.6	79.0	71.5	72.0	72.0	80.1	79.0	77.9	968.4
80 PERCENTILE	46.1	46.1	26.6	26.2	25.2	22.9	11.6	72.0	72.0	69.5	68.4	67.3	621.7
60 PERCENTILE	73.2	73.2	46.2	45.8	57.2	71.8	55.6	72.0	72.0	76.1	75.0	73.9	916.0
40 PERCENTILE	84.3	84.3	86.9	86.5	85.0	86.0	77.5	72.0	72.0	88.2	87.0	85.9	1051.3
20 PERCENTILE	109.6	109.6	135.0	134.8	124.5	132.3	135.9	72.0	72.0	111.5	110.3	109.2	1277.6
MAXIMUM	118.4	118.4	135.0	218.7	196.8	302.8	296.2	106.7	176.9	120.4	119.2	118.0	1564.0
MINIMUM	34.5	34.5	0.0	0.0	0.0	0.0	0.0	72.0	72.0	35.9	34.9	33.9	353.6

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL

78/02/16.

GREYBULL RIVER AT BASIN

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	6.1	5.0	11.5	5.7	2.0	2.2	0.0	0.0	0.0	.2	.7	5.6	39.0
1940	3.9	4.4	5.4	2.4	14.7	4.6	1.2	0.0	1.1	3.9	6.5	7.1	55.7
1941	4.5	3.9	5.9	11.1	17.4	41.3	15.4	55.6	40.3	30.4	17.6	8.7	272.3
1942	4.6	6.4	10.2	17.6	43.6	58.7	12.3	2.2	3.8	6.3	8.1	6.0	179.8
1943	6.3	7.0	15.3	26.8	17.1	57.8	42.3	6.2	3.3	4.1	9.2	8.0	203.4
1944	6.3	6.3	7.8	13.3	45.3	81.7	29.7	2.3	1.0	4.3	7.6	6.2	211.8
1945	6.5	6.1	11.4	8.8	6.3	48.0	48.1	11.9	9.1	7.9	10.0	9.1	203.2
1946	8.2	7.0	10.9	12.7	3.2	16.6	6.5	2.1	13.5	14.4	11.1	6.9	113.1
1947	3.7	5.1	8.1	13.6	22.1	46.1	45.0	6.4	3.8	7.0	11.3	7.3	179.5
1948	6.2	6.0	12.4	18.9	14.0	41.3	15.2	3.2	3.6	5.8	8.3	7.2	142.1
1949	6.0	4.9	12.2	11.0	3.5	30.5	4.8	1.0	.8	4.8	7.8	4.7	92.3
1950	4.3	6.2	7.0	6.3	3.2	5.7	5.9	5.5	6.9	9.3	10.0	9.1	79.4
1951	5.8	5.2	6.7	7.5	5.2	31.1	46.6	12.4	4.4	11.2	9.0	6.4	151.5
1952	5.7	6.0	8.7	38.2	46.1	59.7	10.3	5.9	1.1	1.7	6.5	6.2	192.1
1953	7.1	5.4	7.8	4.8	2.1	25.5	.7	.8	.4	3.1	5.1	6.3	69.1
1954	5.1	5.4	5.5	7.6	2.7	4.4	1.7	0.0	.3	1.3	1.5	4.7	40.2
1955	4.2	4.4	5.1	6.4	.1	1.2	.2	0.0	.2	.6	4.4	6.3	33.1
1956	4.6	4.3	7.3	1.8	2.0	7.2	1.3	1.0	1.2	2.2	5.6	5.5	44.0
1957	5.0	5.1	6.0	3.9	29.9	172.0	57.5	3.5	3.6	4.9	10.3	8.6	310.3
1958	6.1	5.3	5.6	9.1	39.6	24.8	9.7	3.1	1.5	1.7	6.7	6.7	119.9
1959	5.6	5.4	7.4	6.8	3.4	5.3	2.0	.4	.5	4.3	5.5	5.5	52.1
1960	5.1	3.9	7.9	3.5	0.0	.2	0.0	0.0	.4	1.1	4.0	3.3	29.4
1961	3.1	3.8	7.1	.2	0.0	9.7	1.4	.4	9.0	6.9	9.4	5.4	56.4
1962	5.0	13.6	11.2	18.1	4.3	47.0	12.8	6.2	2.7	1.5	6.1	7.1	135.6
1963	3.1	8.5	11.4	5.4	7.9	154.1	7.6	.8	4.1	2.2	7.2	5.8	218.1
1964	6.4	5.4	7.0	7.9	13.7	64.8	46.9	1.9	1.3	1.2	3.4	2.7	162.6
1965	3.0	2.5	4.6	12.2	9.4	103.0	65.0	9.8	13.8	11.4	9.8	8.5	253.0
1966	7.1	5.4	6.3	2.6	0.0	.8	.4	.7	1.9	1.9	7.3	5.6	40.0
1967	4.2	4.1	7.3	2.8	5.5	116.4	58.7	3.1	3.2	3.1	8.6	5.8	222.8
1968	5.3	8.2	7.7	4.7	1.6	24.3	1.9	9.6	4.5	3.9	5.9	6.2	83.8
1969	6.3	5.8	7.0	10.9	3.0	25.6	10.1	1.0	2.2	4.2	7.6	6.3	90.0
1970	3.9	4.9	6.6	4.8	8.6	29.3	5.2	.7	2.3	3.3	7.3	6.4	83.2
1971	5.4	5.5	6.3	6.2	9.6	77.1	7.0	2.4	2.6	12.4	9.0	3.2	146.7
1972	4.3	7.5	11.5	6.5	3.2	39.7	2.0	4.5	1.7	5.0	8.4	6.1	100.4
1973	4.8	5.7	12.8	8.3	27.8	12.0	7.6	2.1	18.8	0.0	0.0	0.0	99.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGE	4.9	5.4	7.9	8.8	11.3	40.8	15.8	4.5	4.6	5.1	6.9	5.6	121.6
MEDIAN	5.1	5.4	7.3	6.8	5.2	29.3	7.0	2.1	2.3	3.9	7.3	6.2	100.4
80 PERCENTILE	3.9	4.3	5.9	3.5	2.0	4.6	1.2	.4	.5	1.3	4.4	4.7	44.0
60 PERCENTILE	4.5	5.1	7.0	6.2	3.2	24.3	4.6	1.0	1.5	3.1	6.5	5.8	83.8
40 PERCENTILE	5.6	5.5	7.8	9.3	8.5	81.3	10.1	3.1	3.3	4.3	8.1	6.3	142.1
20 PERCENTILE	6.3	6.5	11.4	12.7	17.4	64.8	42.3	6.2	4.5	7.0	9.4	7.2	203.2
MAXIMUM	8.2	13.6	15.3	38.2	46.1	172.0	65.0	55.6	40.3	30.4	17.6	9.1	310.3
MINIMUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 78/02/16.
2000 RECOMENDED DEVELOPMENT LEVEL

INFLOW BUFFALO BILL RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	16.3	10.9	27.6	53.4	186.7	231.7	162.7	48.2	21.4	27.4	31.2	19.8	837.0
1940	14.4	15.3	19.1	34.1	148.9	239.7	72.6	25.5	25.7	32.2	26.9	25.7	699.8
1941	18.1	16.4	17.9	29.0	151.0	254.1	119.7	112.4	92.6	63.5	35.5	27.3	947.2
1942	17.6	13.0	16.7	55.2	130.6	243.4	211.2	33.3	17.8	15.0	19.1	17.8	840.4
1943	14.4	17.4	27.7	145.2	173.7	416.2	382.7	95.8	34.1	22.3	26.9	18.8	1374.9
1944	15.5	12.9	13.4	22.8	135.2	267.6	182.3	30.7	18.8	17.8	14.5	16.7	747.9
1945	13.8	10.3	14.3	20.7	109.0	261.0	283.0	71.8	34.5	32.7	26.2	21.2	898.2
1946	15.7	14.6	22.3	84.2	119.0	278.1	142.8	33.7	28.0	24.7	20.7	17.8	801.3
1947	14.8	13.0	15.2	35.4	210.2	272.3	268.2	82.1	29.5	35.0	25.2	20.2	1020.8
1948	19.8	16.3	15.7	32.2	200.7	375.7	128.1	26.6	15.6	14.0	13.3	10.4	868.1
1949	5.9	10.7	8.5	66.2	185.6	322.0	124.0	19.4	17.1	23.8	24.0	13.2	820.1
1950	12.8	9.1	17.1	37.7	100.1	380.5	292.2	51.6	36.8	60.2	37.7	30.0	1045.5
1951	18.7	20.2	18.1	53.0	227.3	305.3	343.4	118.7	43.2	35.0	26.9	21.5	1231.0
1952	13.4	13.6	14.0	86.4	196.4	316.1	139.0	43.8	22.6	15.8	14.4	15.9	893.1
1953	15.2	13.2	18.7	36.6	77.9	323.5	187.2	37.3	21.9	16.4	19.1	15.1	781.8
1954	15.7	13.8	12.5	43.1	228.8	232.5	210.1	30.9	18.0	13.1	13.4	13.5	845.1
1955	9.2	9.4	11.1	21.4	99.9	248.5	125.9	31.0	15.0	15.4	18.3	21.1	625.9
1956	16.8	12.2	26.8	61.0	275.2	446.2	176.4	44.8	22.2	18.2	20.3	17.7	1137.5
1957	13.5	11.9	15.0	27.9	221.7	427.5	235.4	53.1	40.8	27.0	20.9	21.0	1115.4
1958	18.1	13.4	14.2	25.2	285.4	237.6	82.1	32.4	18.9	13.6	24.6	18.3	783.5
1959	17.3	13.5	16.1	35.0	86.0	408.2	152.5	36.9	22.4	31.8	24.0	18.8	862.2
1960	16.2	14.2	22.8	34.4	90.5	245.1	77.0	26.4	18.8	17.4	15.0	12.9	590.4
1961	10.6	9.9	13.1	14.0	138.9	299.4	66.6	19.6	34.1	31.9	34.9	19.7	732.4
1962	18.8	20.3	19.4	91.3	133.0	362.4	200.1	44.6	26.8	20.9	19.8	17.9	995.0
1963	15.9	20.5	17.0	30.2	192.0	407.4	166.4	31.6	30.8	15.7	21.7	20.2	969.1
1964	18.7	17.0	16.5	27.6	153.3	307.3	296.6	42.6	15.5	18.0	21.5	25.9	960.2
1965	21.4	16.7	19.7	40.8	157.1	462.1	349.8	93.3	54.1	44.6	30.9	25.3	1335.5
1966	21.8	18.0	24.8	35.7	161.7	205.9	105.5	34.2	33.2	21.7	25.1	20.2	707.5
1967	18.3	14.3	19.4	22.2	156.1	460.5	311.5	54.1	22.1	25.5	28.9	21.4	1154.0
1968	20.9	19.0	21.9	19.5	72.3	335.9	182.4	83.7	46.6	27.0	23.4	22.8	875.1
1969	21.5	18.2	21.2	64.3	206.3	223.6	134.7	34.0	23.2	22.8	26.2	19.7	815.4
1970	18.6	16.9	17.9	18.7	207.1	427.7	207.0	47.7	35.3	27.7	25.4	20.5	1070.2
1971	20.6	17.3	17.6	39.0	190.0	495.7	301.2	86.0	39.3	36.3	29.8	19.5	1292.0
1972	18.2	18.7	22.5	27.7	148.0	153.4	113.8	35.6	39.2	39.5	32.1	22.7	671.1
1973	22.1	18.5	35.8	32.1	141.2	417.9	169.1	79.0	53.8	22.0	31.8	23.4	1046.4
1974	20.4	17.1	21.2	43.8	171.9	552.0	258.9	59.9	25.1	22.4	27.0	20.5	1259.9
1975	20.0	16.3	19.8	23.3	95.2	270.5	426.0	70.9	30.7	-.0	-.0	-.0	972.4
AVERAGE	16.8	15.0	18.7	43.5	162.0	327.4	199.6	52.0	31.5	26.1	23.7	19.3	935.5
MEDIAN	16.8	14.3	17.9	35.0	161.0	307.3	176.4	42.6	25.7	22.8	24.6	19.8	875.1
90 PERCENTILE	13.9	11.9	14.2	22.8	109.0	239.7	119.7	30.9	18.8	15.8	19.1	16.7	747.9
60 PERCENTILE	15.7	13.5	16.7	32.1	148.0	278.1	152.5	34.2	22.4	21.7	21.7	18.8	837.0
40 PERCENTILE	18.1	16.4	19.1	37.7	173.7	395.9	200.1	48.2	30.8	27.0	26.2	20.5	960.2
20 PERCENTILE	19.8	18.0	22.3	61.0	206.3	417.9	285.0	79.0	40.8	35.0	29.8	22.7	1115.4
MAXIMUM	22.1	20.5	35.8	145.2	285.4	552.0	382.7	118.7	92.6	63.5	37.7	30.0	1374.9
MINIMUM	5.9	9.1	8.5	14.0	72.3	153.4	66.6	19.4	15.0	13.1	13.3	10.4	590.4

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMENDED DEVELOPMENT LEVEL

78/09/16.

SHOSHONE RIVER AT BYRON

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	77.1	50.3	37.0	17.7	14.3	5.8	37.1	37.3	33.2	23.0	64.7	67.5	465.0
1940	25.2	35.5	28.5	17.7	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	368.3
1941	25.8	23.8	24.7	6.8	0.0	0.0	37.1	37.3	33.2	58.9	83.1	83.1	413.8
1942	79.2	52.4	26.2	17.7	13.0	4.6	79.2	37.3	33.2	21.7	64.7	67.5	496.5
1943	25.8	23.8	24.7	17.7	140.2	131.6	250.7	37.3	33.2	37.3	64.7	67.5	854.4
1944	48.5	52.3	24.7	12.2	0.0	0.0	50.3	37.3	33.2	21.7	64.7	67.5	412.3
1945	25.8	23.8	24.7	6.8	0.0	0.0	151.0	37.3	33.2	34.5	64.7	67.5	469.3
1946	40.2	54.1	31.8	17.7	19.1	10.5	37.1	37.3	33.2	21.7	64.7	67.5	434.6
1947	25.8	23.8	24.7	6.8	26.8	18.4	136.1	37.3	33.2	36.9	64.7	67.5	502.1
1948	47.4	55.8	25.2	17.7	82.7	74.4	37.1	37.3	33.2	21.7	64.7	67.5	564.4
1949	25.8	23.8	24.7	6.8	16.1	7.9	37.1	37.3	33.2	21.7	64.7	67.5	366.6
1950	25.8	23.8	24.7	6.8	0.0	0.0	160.4	37.3	33.2	47.7	72.0	72.0	503.7
1951	68.1	59.6	27.6	17.7	71.2	42.7	211.3	37.3	33.2	48.6	72.8	72.8	782.8
1952	68.9	53.0	24.7	17.7	78.2	49.7	37.1	37.3	33.2	21.7	64.7	67.5	573.6
1953	25.8	23.8	24.7	6.8	0.0	0.0	55.3	37.3	33.2	21.7	64.7	67.5	360.8
1954	25.8	23.8	24.7	12.1	22.3	13.8	78.0	37.3	33.2	21.7	64.7	67.5	424.9
1955	25.8	23.8	24.7	6.8	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	342.5
1956	25.8	23.8	24.7	6.8	145.0	136.7	44.4	37.3	33.2	21.7	64.7	67.5	631.6
1957	25.8	23.8	24.7	8.6	116.3	107.9	103.4	37.3	33.2	29.2	64.7	67.5	642.4
1958	28.9	48.4	24.7	15.3	53.2	44.6	37.1	37.3	33.2	21.7	64.7	67.5	476.5
1959	25.8	23.8	24.7	6.8	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	382.5
1960	25.8	23.8	24.7	17.7	0.0	0.0	37.1	37.3	33.2	21.7	64.7	59.6	385.5
1961	21.4	18.6	22.7	5.6	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	329.6
1962	25.9	23.8	24.7	17.7	53.7	45.3	68.1	37.3	33.2	25.4	64.7	67.5	487.3
1963	26.7	46.4	26.5	17.7	93.2	84.9	37.1	37.3	33.2	21.7	64.7	67.5	556.7
1964	25.8	23.8	24.7	14.4	22.0	13.6	144.6	37.3	33.2	21.7	64.7	67.5	513.2
1965	27.1	25.3	29.1	17.7	118.4	110.1	217.9	37.3	33.2	51.6	75.7	75.6	818.8
1966	71.7	53.2	38.5	17.7	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	442.5
1967	25.8	23.8	24.7	6.8	77.9	69.4	179.7	37.3	33.2	27.2	64.7	67.5	636.0
1968	31.7	45.3	31.3	10.7	0.0	0.0	50.5	37.3	33.2	40.2	64.7	67.5	412.3
1969	57.2	57.6	30.7	17.7	25.5	16.9	37.1	37.3	33.2	21.7	64.7	67.5	467.0
1970	25.8	23.8	24.7	6.8	96.3	88.1	75.1	37.3	33.2	28.3	64.7	67.5	571.5
1971	31.4	47.1	27.1	17.7	140.8	132.5	149.4	37.3	33.2	41.2	65.5	67.5	810.4
1972	59.5	38.1	38.9	17.7	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	415.5
1973	25.8	23.8	41.5	17.7	74.0	65.7	37.2	37.3	33.2	41.5	65.8	67.5	531.0
1974	60.2	56.5	30.7	17.7	172.3	164.0	127.1	37.3	33.2	27.7	64.7	67.5	858.7
1975	30.8	44.9	29.2	14.5	0.0	0.0	294.0	37.3	33.2	21.7	64.7	67.5	637.8
AVERAGE	36.9	35.8	27.5	13.2	45.2	40.0	89.1	37.2	33.2	28.5	66.0	68.2	520.7
MEDIAN	25.9	23.8	24.7	15.3	22.0	13.6	44.4	37.3	33.2	21.7	64.7	67.5	476.5
80 PERCENTILE	25.8	23.8	24.7	6.8	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	368.5
60 PERCENTILE	25.8	23.8	24.7	10.7	13.0	4.6	37.1	37.3	33.2	21.7	64.7	67.5	442.5
40 PERCENTILE	27.1	36.1	25.2	17.7	53.2	44.6	66.1	37.3	33.2	25.4	64.7	67.5	503.7
20 PERCENTILE	57.2	52.4	30.7	17.7	93.2	84.9	151.0	37.3	33.2	37.3	64.7	67.5	631.6
MAXIMUM	79.2	59.6	41.5	17.7	172.3	164.0	294.0	37.3	33.2	58.9	83.1	83.1	858.7
MINIMUM	21.4	18.6	22.7	5.6	0.0	0.0	37.1	37.3	33.2	21.7	64.7	59.6	329.6

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMENDED DEVELOPMENT LEVEL

78/02/16.

INFLOW YELLOWTAIL RESERVOIR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	166.9	131.4	134.7	62.8	103.5	79.7	0.0	69.6	107.9	125.3	145.1	168.6	1315.5
1940	102.7	124.9	84.2	59.0	58.3	94.8	35.4	62.0	114.0	141.7	134.7	133.7	1165.4
1941	100.0	102.7	147.8	119.7	169.9	234.9	58.8	189.8	196.6	262.7	281.2	245.0	2109.4
1942	225.1	214.3	233.3	233.4	277.8	382.4	135.0	80.7	129.1	176.0	205.1	175.8	2428.0
1943	97.5	159.1	265.1	259.7	330.3	430.8	509.0	88.3	125.5	187.3	219.4	189.1	2860.8
1944	163.2	168.5	215.1	236.5	376.0	510.6	291.9	92.6	132.6	155.5	194.4	159.8	2696.7
1945	131.5	131.8	200.4	157.2	144.8	335.2	366.8	133.6	190.9	229.3	241.1	225.7	2488.2
1946	192.1	197.2	161.7	134.2	159.6	193.1	117.5	99.1	186.2	182.2	211.6	199.8	2054.5
1947	137.9	143.5	246.7	281.4	410.8	309.9	509.0	131.0	126.9	231.6	242.1	224.6	3085.4
1948	189.4	240.9	286.6	175.5	261.6	290.9	136.6	99.3	137.9	143.1	197.2	157.9	2297.0
1949	128.5	123.8	227.5	140.3	180.6	243.2	106.5	73.1	133.1	185.0	215.2	196.3	1953.0
1950	163.9	176.4	211.3	172.6	161.2	215.1	268.1	122.0	161.5	248.9	246.7	245.0	2392.7
1951	215.0	233.2	229.7	203.7	209.2	293.1	428.2	183.4	140.4	246.3	255.9	221.5	2859.4
1952	237.7	222.6	179.3	203.6	322.8	298.9	110.6	86.6	104.4	158.2	192.5	186.4	2295.5
1953	155.2	147.9	107.5	84.9	66.6	210.7	54.3	81.6	107.2	157.5	205.4	189.4	1568.2
1954	139.0	152.3	129.6	96.1	157.4	110.6	89.8	71.8	106.0	160.4	190.9	182.9	1586.7
1955	113.6	126.3	96.9	95.5	112.7	177.4	38.7	76.6	113.2	162.9	177.2	177.2	1468.2
1956	136.8	123.6	225.9	165.6	331.7	318.4	113.0	76.8	118.3	146.3	181.3	170.1	2097.7
1957	113.8	136.4	207.1	219.7	395.0	571.3	296.6	85.9	132.9	227.4	252.0	227.2	2865.2
1958	173.4	195.6	124.0	90.4	233.5	203.3	3.1	102.9	116.2	158.5	194.4	187.2	1782.5
1959	141.8	143.1	130.5	85.1	69.3	178.8	83.8	77.7	122.1	182.6	190.0	147.8	1552.5
1960	129.5	139.3	119.1	59.5	8.7	41.9	0.0	75.2	129.5	127.4	152.3	128.8	1131.2
1961	88.6	107.0	91.5	52.8	67.3	75.9	0.0	61.7	148.0	177.7	190.3	160.6	1221.5
1962	108.3	202.1	252.7	241.4	285.7	358.8	214.4	115.5	148.2	178.2	206.0	171.9	2475.2
1963	119.1	198.3	142.0	148.5	277.3	471.9	141.3	99.4	161.1	194.4	227.2	186.3	2386.6
1964	152.6	159.9	174.1	171.1	285.0	452.8	282.7	105.7	139.1	166.4	201.7	173.6	2464.6
1965	151.1	145.6	219.8	270.8	399.1	602.0	520.5	173.2	176.3	247.8	206.1	232.5	3364.6
1966	209.1	201.4	77.8	43.2	30.5	7.1	0.0	72.0	131.4	140.0	172.9	168.1	1243.5
1967	131.7	125.7	222.1	256.4	222.5	759.5	609.8	113.5	166.4	211.4	214.0	218.3	3251.2
1968	196.1	217.7	174.9	123.8	153.6	459.7	149.2	175.4	146.7	235.2	247.9	227.3	2527.5
1969	210.6	220.8	164.8	161.2	183.9	206.0	128.4	94.5	120.7	187.8	206.9	196.6	2082.1
1970	142.7	159.2	130.6	90.6	316.0	356.2	163.7	94.3	138.8	174.9	204.3	185.0	2156.4
1971	143.4	175.4	227.4	291.1	472.1	560.5	358.9	94.3	146.5	289.1	271.9	238.1	3290.6
1972	221.9	263.6	275.2	198.7	240.7	416.0	151.3	134.7	149.0	207.5	236.8	200.1	2695.6
1973	171.7	146.3	207.5	171.4	353.0	323.4	135.1	104.4	300.0	247.4	251.6	237.3	2669.1
1974	224.0	220.5	211.2	212.3	398.9	447.9	236.3	95.8	144.6	193.1	217.0	190.1	2791.7
1975	160.2	182.1	231.9	214.6	289.0	415.5	608.4	122.7	150.7	72.9	114.0	114.8	2676.7
AVERAGE	156.5	169.7	182.4	162.3	230.2	316.1	201.4	103.2	144.1	188.6	208.5	191.4	2254.3
MEDIAN	151.1	159.2	179.3	161.2	222.5	293.1	135.1	94.3	133.1	182.2	206.0	188.4	2297.0
80 PERCENTILE	113.8	126.3	124.0	85.1	105.5	177.4	38.7	75.2	116.2	158.2	190.0	168.6	1568.2
60 PERCENTILE	137.9	145.6	162.0	140.3	169.9	234.9	113.0	86.6	129.1	174.9	201.7	185.0	2097.7
40 PERCENTILE	163.4	175.4	211.2	172.6	277.5	382.4	151.3	99.3	140.4	187.8	214.0	196.3	2464.6
20 PERCENTILE	196.1	214.3	227.5	233.4	331.7	452.8	296.6	122.0	166.4	231.6	242.1	225.7	2791.7
MAXIMUM	237.7	263.6	275.2	291.1	472.1	759.5	609.8	189.8	300.0	289.1	281.2	245.0	3364.6
MINIMUM	88.6	102.7	77.8	43.2	8.7	7.1	0.0	61.7	104.4	125.3	134.7	128.8	1131.2

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMENDED DEVELOPMENT LEVEL

78/02/16.

BIGHORN RIVER AT ST XAVIER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	177.2	177.3	177.5	128.5	111.6	105.6	103.9	116.9	96.4	128.6	168.1	170.9	1662.5
1940	103.9	126.2	85.7	60.6	52.8	78.1	10.7	38.1	102.5	165.0	137.8	136.1	1097.4
1941	101.2	104.0	138.6	132.0	124.5	110.2	107.6	128.8	139.8	165.3	149.8	141.4	1543.3
1942	283.7	283.8	284.1	164.8	165.9	188.1	160.3	148.0	158.2	171.4	170.0	168.5	2346.9
1943	233.3	233.4	233.7	215.0	218.5	252.6	534.4	156.6	166.8	180.0	178.6	177.1	2779.9
1944	241.8	241.9	242.1	245.7	250.8	292.2	317.3	141.7	151.8	165.0	163.5	162.0	2615.6
1945	214.1	214.2	214.4	129.1	110.5	102.8	352.9	198.9	209.0	222.2	220.8	219.2	2407.9
1946	243.2	243.3	243.5	128.2	109.1	102.7	94.8	147.1	157.5	170.9	169.5	168.0	1977.9
1947	235.6	235.6	235.9	236.4	241.0	279.8	534.4	185.9	196.1	209.3	207.9	206.4	3004.2
1948	285.1	285.2	285.5	129.3	125.3	138.6	162.0	145.8	155.9	169.1	167.6	166.1	2215.5
1949	219.4	219.5	219.8	129.0	109.8	102.6	88.8	141.8	152.2	165.5	164.1	162.7	1875.2
1950	243.4	243.5	243.7	128.1	108.8	102.4	169.2	199.7	209.8	223.1	221.7	220.2	2313.5
1951	285.5	285.6	285.8	128.4	115.8	127.0	453.5	204.2	214.3	227.4	226.0	224.5	2777.9
1952	272.7	272.8	273.0	153.3	153.8	173.2	135.9	140.7	150.9	164.1	162.7	161.2	2214.2
1953	196.4	196.5	196.7	128.8	112.6	105.7	97.2	110.5	125.9	166.0	155.3	191.7	1783.3
1954	120.9	121.0	130.0	131.1	112.2	105.0	100.4	112.1	128.2	168.6	194.2	185.2	1609.1
1955	125.9	126.7	134.8	142.5	123.3	111.4	71.3	52.7	101.7	166.2	180.2	179.6	1516.3
1956	128.0	124.8	138.8	143.5	117.0	103.6	88.9	120.4	130.8	151.9	144.0	132.0	1523.7
1957	212.0	212.0	212.3	264.5	270.6	316.7	321.9	179.8	190.0	203.3	201.9	200.4	2785.3
1958	223.8	223.9	224.2	129.9	110.4	102.6	90.5	104.7	117.6	155.9	147.0	122.6	1753.1
1959	182.7	182.7	183.0	128.6	112.2	105.6	98.7	110.7	125.9	164.4	153.5	190.1	1738.3
1960	119.7	120.4	130.0	130.6	115.6	109.7	0.0	51.3	118.0	130.7	155.4	131.1	1312.5
1961	89.8	108.3	93.0	54.5	61.9	59.2	0.0	37.8	137.9	176.0	193.6	162.9	1174.9
1962	128.8	134.4	136.2	135.4	131.3	146.3	239.8	158.6	168.8	181.9	180.4	178.9	1920.8
1963	219.3	219.4	219.6	178.1	179.8	205.7	166.6	168.4	178.5	191.7	190.3	188.8	2306.2
1964	221.7	221.8	222.0	181.4	183.3	209.9	308.0	152.0	162.1	175.3	173.8	172.3	2383.7
1965	231.7	231.8	232.0	290.3	297.6	349.7	545.9	205.8	216.0	229.1	227.6	226.1	3283.5
1966	222.3	222.3	222.6	127.8	112.4	107.8	8.4	48.1	109.9	143.4	176.0	170.5	1671.5
1967	132.8	126.9	138.8	209.2	212.6	246.9	635.1	179.4	189.6	202.8	201.3	199.8	2675.4
1968	255.8	255.8	256.1	130.7	128.8	143.7	174.6	205.2	215.3	228.4	227.0	225.5	2446.8
1969	258.2	258.3	258.5	128.3	108.8	102.3	89.0	144.7	155.0	168.3	166.9	165.5	2003.8
1970	203.7	203.8	204.0	137.6	137.3	153.5	189.1	154.1	164.3	177.5	176.1	174.6	2075.5
1971	248.2	248.3	248.5	305.9	314.0	369.4	384.2	203.1	213.3	226.6	225.3	223.8	3210.6
1972	313.1	313.2	313.4	165.4	166.4	189.2	176.6	180.3	190.5	203.7	202.2	200.7	2614.6
1973	241.4	241.4	241.7	163.1	164.1	185.9	160.5	222.8	233.1	246.3	244.8	243.2	2588.1
1974	278.1	278.2	278.4	226.5	230.6	267.5	261.7	162.8	173.0	186.2	184.8	183.2	2710.8
1975	250.9	251.0	251.2	184.5	186.5	213.6	633.7	109.7	119.7	147.1	141.6	120.9	2610.5
AVERAGE	209.3	210.5	211.6	160.2	153.7	166.7	218.0	142.4	160.2	181.6	182.5	179.8	2176.5
MEDIAN	221.7	221.8	222.0	132.0	124.5	127.0	160.5	147.1	157.5	171.4	176.1	177.1	2214.2
80 PERCENTILE	128.0	126.7	138.8	128.4	110.4	102.7	88.9	110.5	125.9	164.4	.0.4	162.0	1609.1
60 PERCENTILE	212.0	212.0	212.3	129.9	115.6	107.8	103.9	141.7	151.8	168.3	169.5	170.5	1920.8
40 PERCENTILE	233.3	233.4	233.7	143.5	137.3	153.5	174.6	156.6	166.8	180.0	184.8	185.2	2346.9
20 PERCENTILE	255.8	255.8	256.1	209.2	212.6	246.9	321.9	185.9	196.1	209.3	207.9	206.4	2675.4
MAXIMUM	313.1	313.2	313.4	305.9	314.0	369.4	635.1	222.8	233.1	246.3	244.8	243.2	3283.5
MINIMUM	89.8	104.0	85.7	54.5	52.8	59.2	0.0	37.8	96.4	128.6	137.8	122.6	1097.4

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL

78/02/17.

TONGUE RIVER AT MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	5.3	7.0	33.5	14.5	0.0	47.9	0.0	0.0	0.0	16.3	5.1	6.0	135.6
1940	4.1	5.1	7.5	0.0	0.0	7.9	0.0	0.0	0.0	17.5	4.0	3.9	50.0
1941	3.8	5.6	5.7	0.0	5.1	35.0	0.0	0.0	8.1	30.1	32.7	16.8	136.9
1942	9.2	5.6	23.0	19.1	26.5	87.9	0.0	0.0	0.0	26.5	28.9	16.8	243.5
1943	8.9	16.2	43.6	46.8	34.5	97.9	0.0	0.0	0.0	15.5	27.4	14.8	325.6
1944	7.4	3.2	31.6	25.8	70.5	211.9	87.5	0.0	0.0	13.5	32.4	15.8	499.5
1945	9.2	7.2	21.6	17.3	10.5	115.9	31.5	0.0	0.0	37.5	28.4	13.3	292.3
1946	11.4	9.7	48.6	28.2	25.7	95.2	18.0	0.0	11.2	38.6	31.6	18.9	337.0
1947	21.7	15.5	87.3	43.8	70.8	49.8	30.7	0.0	0.0	15.6	25.5	15.4	396.0
1948	11.8	14.0	33.4	39.3	52.8	71.4	50.0	0.0	0.0	17.0	30.8	8.0	338.4
1949	7.0	3.4	41.1	25.7	33.8	89.9	0.0	0.0	0.0	8.8	24.6	23.3	257.6
1950	7.7	5.8	17.6	20.7	17.0	20.3	0.0	0.0	3.2	19.6	22.1	10.5	144.4
1951	10.1	9.5	10.1	10.7	15.2	15.8	5.8	0.0	17.4	18.7	29.4	9.0	149.6
1952	5.8	6.5	27.6	83.4	49.4	42.8	0.0	0.0	0.0	19.1	11.1	10.0	255.7
1953	8.4	6.2	9.5	5.0	10.1	86.1	0.0	0.0	0.0	14.0	21.3	9.5	170.1
1954	8.2	11.5	10.2	10.0	.1	0.0	0.0	0.0	0.0	3.2	10.5	10.0	63.6
1955	6.7	2.9	12.1	23.5	35.3	55.2	2.6	0.0	0.0	.9	5.6	6.7	151.4
1956	7.1	6.2	25.9	49.3	22.2	43.5	0.0	0.0	0.0	3.1	15.3	11.1	183.7
1957	5.4	4.9	10.9	18.4	13.2	100.4	11.3	0.0	6.0	13.8	7.7	7.4	199.3
1958	7.5	6.5	10.4	8.7	15.8	18.5	10.1	0.0	0.0	11.8	13.1	12.2	114.5
1959	9.4	7.7	87.4	28.5	11.3	4.4	0.0	0.0	0.0	5.4	7.9	10.2	172.2
1960	9.0	8.0	46.1	16.4	0.0	0.0	0.0	0.0	0.0	0.0	3.3	1.7	84.4
1961	2.1	2.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	3.3	2.5	5.5	17.3
1962	5.7	12.3	31.1	33.3	33.2	108.8	1.0	0.0	1.8	13.0	10.1	7.9	258.1
1963	5.5	35.5	24.7	10.4	70.5	155.8	0.0	0.0	.1	.0	2.7	1.8	306.9
1964	6.1	7.6	8.4	14.8	35.4	131.6	34.6	0.0	5.4	11.2	9.6	7.9	272.5
1965	11.0	23.9	33.5	97.4	44.6	64.2	22.6	0.0	7.7	33.7	17.6	6.9	365.0
1966	6.2	5.1	11.9	5.1	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.6	34.9
1967	6.9	10.2	15.6	17.2	23.2	198.7	45.9	0.0	7.5	11.9	17.0	11.8	359.8
1968	14.6	27.7	44.3	23.5	17.5	147.4	19.6	15.9	24.4	30.7	16.1	9.4	391.0
1969	9.7	9.1	89.5	59.2	52.7	33.3	34.9	0.0	.1	10.0	5.9	10.8	315.1
1970	10.3	11.8	21.5	32.6	79.2	145.1	10.2	0.0	1.6	14.0	14.3	9.8	350.3
1971	8.7	96.8	106.2	55.2	57.1	85.6	0.0	0.0	2.5	40.2	18.7	9.4	480.3
1972	7.4	15.5	91.6	53.4	33.4	67.7	1.5	0.0	4.7	20.5	17.6	7.5	320.7
1973	11.5	12.6	13.7	15.4	70.6	102.0	5.7	0.0	13.1	26.3	21.0	7.1	298.9
1974	22.9	17.1	15.1	17.3	33.6	62.2	2.8	0.0	0.0	11.5	15.3	16.8	214.5
1975	27.7	7.0	56.5	46.6	96.7	148.9	117.5	26.2	5.8	0.0	0.0	0.0	532.8
AVERAGE	9.2	12.4	34.0	28.0	31.5	73.6	14.7	1.1	3.2	15.5	15.9	10.0	249.2
MEDIAN	7.7	7.7	23.0	19.1	25.7	64.2	1.0	0.0	0.0	14.0	15.3	9.5	255.7
80 PERCENTILE	5.7	5.1	10.2	10.0	3.1	15.8	0.0	0.0	0.0	3.3	5.6	6.7	135.6
60 PERCENTILE	7.1	6.5	15.6	17.2	17.0	47.9	0.0	0.0	0.0	11.9	11.1	8.9	183.7
40 PERCENTILE	8.9	9.7	31.1	25.7	33.6	95.6	5.7	0.0	.1	16.3	17.6	10.2	292.3
20 PERCENTILE	10.3	15.5	46.1	43.8	52.7	108.8	22.6	0.0	6.0	26.3	27.4	14.8	338.4
MAXIMUM	27.9	96.8	106.2	97.4	79.2	211.9	87.5	15.9	24.4	40.2	32.7	23.3	499.5
MINIMUM	2.1	2.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.7	17.3

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMEND DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER AT MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	346.5	260.4	464.0	400.3	781.4	1285.2	445.1	167.0	133.2	353.0	332.1	302.7	5210.8
1940	177.9	254.3	282.0	275.7	642.5	1217.0	187.2	0.0	112.8	443.2	305.0	292.6	4190.1
1941	226.7	238.8	329.1	325.5	642.2	1034.8	323.7	229.4	678.8	719.8	523.1	427.5	5659.4
1942	469.2	461.3	649.1	552.9	980.6	1750.7	956.6	313.5	294.7	464.6	485.0	393.1	7731.2
1943	396.6	616.1	854.0	864.0	969.3	2519.3	2088.1	608.1	442.9	482.2	476.9	413.2	10730.6
1944	414.8	374.0	641.2	475.1	810.9	2613.6	1476.3	362.1	369.7	458.4	444.2	324.5	8764.6
1945	412.7	391.6	559.5	334.1	531.9	1697.5	1584.2	505.0	409.4	577.3	513.7	384.2	7860.9
1946	483.0	444.8	542.5	472.0	707.0	1434.6	599.9	232.8	382.7	532.6	458.1	361.2	6651.1
1947	326.3	323.6	593.1	630.1	1287.0	1714.4	1426.9	458.5	403.7	581.9	519.7	451.4	8716.4
1948	459.9	437.7	654.0	481.2	1048.3	2418.7	1013.6	360.1	245.9	434.5	448.5	278.1	8280.5
1949	286.1	340.8	629.0	499.7	973.0	1470.2	565.6	205.0	303.3	448.2	437.8	288.5	6447.1
1950	313.6	371.4	699.0	546.3	608.7	1694.8	1414.5	592.7	457.9	648.7	554.3	491.4	8395.3
1951	462.1	470.9	686.4	487.7	909.7	1427.0	1411.4	738.8	532.6	611.0	559.8	447.9	8745.2
1952	452.4	461.3	665.8	687.2	1378.3	1749.3	785.1	398.2	316.3	418.0	389.9	334.8	8036.5
1953	406.8	357.1	419.9	323.1	433.4	1704.4	785.1	298.2	227.7	377.7	398.9	401.4	6133.6
1954	289.5	330.0	310.8	349.9	890.6	1055.3	915.6	299.5	224.2	393.6	424.4	371.5	5814.8
1955	261.9	274.1	281.4	525.6	628.9	1290.9	548.4	134.8	158.7	383.7	361.2	399.9	5249.5
1956	323.4	307.0	555.4	522.4	1196.2	2089.5	667.7	310.1	287.4	379.1	433.0	327.9	7389.0
1957	322.8	363.6	471.6	542.0	1175.9	2681.0	1379.4	368.6	452.2	505.8	500.2	427.5	9190.5
1958	413.9	399.9	455.3	343.4	970.4	1347.7	589.1	189.7	210.5	371.4	377.7	318.8	5907.6
1959	341.3	333.3	750.8	392.3	563.5	1879.3	815.6	221.5	249.9	476.7	422.2	445.0	6851.3
1960	249.2	293.4	476.5	379.9	439.4	1125.0	134.7	99.2	167.0	328.7	375.6	275.1	4383.6
1961	268.9	278.5	258.1	139.4	322.9	1104.2	92.7	0.0	360.6	543.4	523.8	342.8	4235.2
1962	297.5	436.7	467.9	522.0	915.9	1957.5	1118.9	438.1	420.5	503.6	440.3	392.7	7911.5
1963	379.8	552.3	471.6	398.4	976.7	2068.1	725.0	237.6	369.7	400.4	428.1	335.9	7343.6
1964	398.3	410.4	382.3	456.1	908.4	2081.4	1497.5	388.2	349.7	411.0	426.7	382.8	8112.7
1965	507.5	486.8	527.4	848.5	1019.9	2325.5	1959.4	642.9	629.8	666.5	435.4	413.6	10505.1
1966	375.8	375.0	547.3	367.2	682.5	978.3	296.1	93.1	173.2	336.0	392.1	394.1	5010.6
1967	344.3	324.6	356.7	410.2	770.9	2344.4	2335.0	527.8	398.7	530.5	514.5	493.9	9351.4
1968	621.9	664.2	660.3	429.9	612.5	2300.3	1261.0	609.1	620.1	623.3	546.7	436.6	9585.8
1969	522.9	480.3	633.5	560.8	1054.1	1319.1	1098.7	384.4	315.8	459.8	430.5	457.4	7917.2
1970	494.7	486.4	418.2	330.0	1159.8	2296.1	1367.8	586.3	401.2	515.9	486.0	447.4	8789.7
1971	550.5	953.8	823.1	839.1	1199.0	2354.9	1436.2	551.8	524.1	731.1	591.0	499.1	11053.7
1972	501.1	546.0	1105.0	644.9	960.5	2001.5	942.4	507.7	504.4	662.1	633.0	394.9	9403.4
1973	527.0	529.9	532.5	517.8	1128.7	1508.3	661.3	380.0	498.9	600.7	681.0	521.6	8087.6
1974	528.6	514.6	564.3	635.6	825.3	2527.3	1610.6	533.0	452.1	528.0	590.6	468.9	9778.9
1975	548.7	485.1	695.0	608.2	1322.1	2040.3	2553.4	748.3	404.2	3.1	8.7	5.9	9462.9
AVERAGE	396.9	422.4	587.1	489.8	876.1	1792.6	1052.7	366.5	363.9	484.0	454.9	382.3	7639.2
MEDIAN	396.6	391.6	582.5	475.1	908.4	1714.4	942.4	342.1	369.7	476.7	444.2	394.1	7911.5
80 PERCENTILE	286.1	307.0	382.3	343.4	612.5	1217.0	589.1	189.7	224.2	383.7	392.1	324.5	5859.4
60 PERCENTILE	344.3	363.6	471.6	410.2	781.4	1508.3	785.1	299.5	315.8	448.2	433.0	382.8	7343.6
40 PERCENTILE	413.9	437.7	564.3	517.8	969.3	1957.5	1118.9	386.3	401.2	515.9	476.9	413.2	8112.7
20 PERCENTILE	494.7	486.8	665.8	560.8	1054.1	2325.5	1436.2	527.8	457.9	600.7	523.8	447.9	9190.5
MAXIMUM	621.9	953.8	1105.0	848.0	1378.3	2681.0	2335.0	748.8	678.8	731.1	681.0	521.6	11053.7
MINIMUM	177.9	238.8	258.1	139.4	322.9	978.3	92.7	0.0	112.8	328.7	305.0	275.1	4190.1

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMEND DEVELOPMENT LEVEL

78/02/17.

POWDER RIVER AT ARVADA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	8.4	4.0	29.1	10.3	15.4	14.8	0.0	0.0	0.0	5.0	5.3	7.2	99.5
1940	4.3	8.7	17.8	19.4	7.4	14.8	0.0	0.0	0.0	25.6	4.4	6.9	109.0
1941	5.9	6.6	10.8	44.6	73.4	18.3	39.7	44.1	9.2	17.9	14.1	11.6	315.4
1942	5.5	6.7	15.7	29.9	36.8	9.8	0.0	0.0	0.0	6.5	8.3	5.8	127.0
1943	7.2	8.9	38.3	41.4	32.0	49.7	.7	0.0	0.0	3.3	5.9	4.5	191.8
1944	3.1	3.3	8.5	33.2	91.2	86.0	13.8	0.0	0.0	6.6	7.9	7.1	260.6
1945	4.6	8.4	31.2	38.2	30.7	46.5	14.4	2.3	2.3	9.6	11.2	6.3	216.6
1946	9.6	12.0	18.2	23.3	21.2	28.0	11.6	0.0	5.0	9.0	10.2	7.8	155.9
1947	6.0	9.7	57.1	18.6	78.4	38.0	10.1	0.0	0.0	5.4	9.3	6.8	239.3
1948	5.5	12.3	51.8	13.7	24.7	44.9	13.8	0.0	0.0	8.1	8.3	5.4	213.4
1949	4.1	5.8	52.9	18.3	25.0	31.8	0.0	0.0	0.0	5.7	6.0	1.6	150.2
1950	2.2	3.0	12.4	21.4	46.1	11.6	0.0	0.0	0.0	6.3	7.2	2.6	112.8
1951	4.3	4.4	13.5	8.7	11.0	0.0	0.0	0.0	13.5	7.3	6.9	4.8	74.3
1952	2.6	5.4	14.0	21.2	66.0	7.6	.4	0.0	0.0	1.7	4.5	3.1	126.4
1953	5.3	6.2	17.2	9.3	2.2	29.6	0.0	4.8	0.0	.4	3.5	3.6	82.0
1954	3.9	11.5	13.1	15.0	8.5	0.0	0.0	0.0	0.0	.6	4.1	2.3	58.9
1955	2.7	3.2	43.1	29.7	23.1	36.1	0.0	3.0	0.0	1.7	3.0	12.7	158.2
1956	6.3	6.8	36.4	14.2	14.3	8.3	0.0	0.0	0.0	.4	2.8	4.6	94.1
1957	4.0	1.9	12.9	13.0	22.6	58.1	4.4	0.0	0.0	6.2	8.5	7.0	138.5
1958	5.7	4.6	11.7	15.2	22.9	15.2	18.1	0.0	0.0	1.4	5.5	4.3	104.5
1959	4.2	3.5	21.0	10.0	22.8	17.4	2.0	0.0	0.0	2.4	2.9	4.4	90.5
1960	3.3	5.0	36.2	13.7	.9	0.0	0.0	0.0	0.0	.4	2.3	2.0	63.7
1961	2.7	2.9	7.9	5.0	8.8	0.0	0.0	0.0	0.0	9.8	6.5	2.6	46.1
1962	2.4	25.5	14.7	24.1	118.3	190.9	39.3	6.0	6.9	23.6	10.8	9.0	471.4
1963	7.7	14.7	13.3	13.6	28.2	47.9	1.0	0.0	6.2	4.2	7.1	5.1	149.0
1964	5.9	4.3	12.3	27.2	33.2	97.1	10.3	0.0	0.0	2.8	7.0	6.2	206.2
1965	9.2	13.3	29.8	40.3	41.4	59.3	19.0	.9	.8	8.8	8.3	5.4	235.4
1966	4.9	5.5	20.5	15.9	12.2	1.1	0.0	0.0	2.5	3.1	6.6	4.0	76.3
1967	5.0	6.4	12.5	10.5	25.0	155.1	38.2	0.0	2.9	8.6	9.6	5.0	278.8
1968	5.0	7.5	21.3	13.5	39.2	121.8	11.2	3.6	6.8	10.6	9.1	7.3	256.8
1969	9.1	7.0	18.7	14.9	12.9	10.1	.7	0.0	0.0	3.4	7.0	4.8	88.5
1970	6.1	9.1	16.3	12.5	42.2	44.5	2.6	0.0	0.0	5.3	8.3	6.8	173.6
1971	4.8	8.8	36.3	16.6	48.3	49.5	0.0	0.0	0.0	7.2	9.5	6.5	187.5
1972	5.6	32.4	38.0	20.6	43.9	32.4	0.0	3.3	1.4	9.8	9.3	5.0	201.6
1973	5.9	7.5	20.0	39.4	74.1	22.3	16.3	0.0	14.9	13.7	18.6	18.2	250.9
1974	15.3	11.9	16.9	39.5	17.1	3.1	0.0	0.0	0.0	6.1	8.8	6.2	124.9
1975	5.2	5.1	16.0	21.1	36.6	96.9	20.1	0.0	0.0	.4	.6	.4	202.3
AVERAGE	5.5	8.1	23.2	21.6	34.6	41.5	7.8	1.8	2.0	6.7	7.3	5.8	165.7
MEDIAN	5.3	6.7	17.8	16.6	25.0	28.0	.7	0.0	0.0	6.1	7.1	5.4	149.0
80 PERCENTILE	3.3	3.8	12.5	12.5	12.2	7.6	0.0	0.0	0.0	1.7	4.5	3.6	88.5
60 PERCENTILE	4.8	5.5	15.7	14.9	22.8	15.2	0.0	0.0	0.0	5.0	6.6	4.8	124.9
40 PERCENTILE	5.7	7.5	20.5	20.6	32.0	36.1	2.6	0.0	0.0	6.6	8.3	6.2	173.6
20 PERCENTILE	6.6	11.5	36.3	29.9	48.3	58.1	13.8	.9	2.9	9.6	9.3	7.1	235.4
MAXIMUM	15.3	32.4	57.1	44.6	118.3	190.9	39.7	44.1	14.9	25.6	18.6	18.2	471.4
MINIMUM	2.2	1.9	7.9	5.0	.9	0.0	0.0	0.0	0.0	.4	2.3	1.6	46.1

STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 78/02/17.
2000 RECOMEND DEVELOPMENT LEVEL

POWDER RIVER AT LOCATE

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	5.1	.4	121.3	18.8	15.0	38.3	0.0	0.0	0.0	0.0	.1	1.7	200.7
1940	0.0	0.0	23.4	20.9	.9	20.4	9.3	0.0	0.0	51.8	4.2	9.0	139.9
1941	4.2	6.7	17.5	58.4	150.4	93.6	15.6	43.7	39.5	34.5	18.0	21.8	463.7
1942	2.5	7.2	56.3	40.1	61.7	57.8	0.0	0.0	0.0	4.8	4.5	6.1	240.9
1943	7.9	209.5	148.1	64.9	38.5	130.4	14.7	0.0	0.0	0.0	4.9	2.5	621.3
1944	.3	0.0	227.5	174.5	165.0	453.6	65.6	0.0	0.0	1.7	6.5	4.5	1049.2
1945	2.6	11.6	56.5	34.3	27.8	131.1	29.8	3.0	2.3	10.9	10.1	5.9	325.7
1946	12.7	18.9	55.5	36.8	50.4	81.9	33.5	0.0	11.9	37.6	15.5	16.4	371.0
1947	11.8	33.9	194.1	62.4	117.0	84.8	26.7	0.0	0.0	2.7	6.1	6.2	545.6
1948	2.7	98.5	202.4	30.1	40.7	110.3	51.6	.6	0.0	7.9	12.6	1.5	558.8
1949	.7	0.0	224.4	40.5	42.1	63.8	0.0	0.0	0.0	4.1	9.5	0.0	385.1
1950	0.0	0.0	0.0	64.3	64.4	37.4	0.0	0.0	0.0	6.1	3.6	4.1	179.9
1951	1.4	2.3	21.5	17.8	5.1	0.0	0.0	5.2	23.6	11.8	15.7	19.7	121.9
1952	1.3	8.1	99.1	103.4	74.4	28.5	0.0	0.0	0.0	0.0	2.3	2.3	319.4
1953	3.8	7.1	27.5	11.6	6.3	92.9	0.0	5.4	0.0	0.0	.6	3.9	159.0
1954	3.6	15.8	20.5	8.5	6.5	0.0	0.0	0.0	1.8	0.0	0.0	1.4	58.0
1955	.3	0.0	28.6	41.0	30.6	43.9	3.4	0.0	0.0	0.0	0.0	.8	148.6
1956	3.6	1.1	69.2	22.6	24.2	24.8	0.0	0.0	0.0	0.0	.2	3.2	148.9
1957	1.6	.4	18.9	13.1	3.5	118.1	10.4	0.0	0.0	2.9	7.6	3.8	180.2
1958	5.9	6.4	13.5	17.1	27.6	35.9	29.4	0.0	0.0	0.0	1.3	4.9	141.9
1959	2.8	2.9	157.3	21.3	15.5	18.8	0.0	0.0	0.0	0.0	2.8	6.3	227.7
1960	2.8	4.8	121.2	21.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	150.1
1961	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.5	0.0	15.2
1962	0.0	72.8	47.1	34.6	117.5	246.3	96.0	3.0	0.0	23.7	12.6	5.9	659.4
1963	3.9	59.3	39.4	20.1	44.1	175.2	23.4	0.0	.5	2.7	7.6	1.8	377.9
1964	3.6	3.0	23.9	27.3	25.2	172.2	42.0	0.0	0.0	0.0	.9	1.8	299.8
1965	6.6	11.4	10.4	175.4	48.7	91.7	20.7	0.0	0.0	11.3	9.4	3.8	389.3
1966	4.5	3.5	25.4	19.4	4.8	0.0	0.0	0.0	0.0	0.0	1.1	1.6	60.2
1967	2.1	6.7	27.4	17.0	53.5	279.6	81.2	0.0	10.7	10.6	12.4	3.0	504.1
1968	2.7	22.0	115.8	25.6	34.7	201.4	18.4	17.6	17.3	12.9	14.9	4.2	487.3
1969	7.5	5.5	131.4	68.7	44.6	12.1	23.7	0.0	0.0	0.0	7.5	1.9	302.8
1970	3.4	10.5	50.3	27.4	94.5	114.6	1.0	0.0	0.0	1.3	9.4	3.2	315.5
1971	1.6	108.9	172.8	44.8	55.9	138.6	0.0	0.0	0.0	49.2	18.2	2.2	612.1
1972	4.1	74.6	279.2	37.1	45.5	74.1	6.6	.2	5.7	15.5	17.8	2.8	563.1
1973	7.6	9.8	32.7	38.9	102.4	83.2	3.1	0.0	26.2	16.1	14.9	4.5	339.3
1974	24.4	28.6	40.8	49.9	43.5	23.5	0.0	0.0	0.0	11.1	15.2	8.5	245.4
1975	7.2	9.3	54.8	45.9	106.3	154.6	72.7	0.0	0.0	0.0	0.0	0.0	450.8
AVERAGE	4.2	23.2	80.2	42.3	48.3	91.7	18.3	2.1	3.8	9.0	7.3	4.6	335.1
MEDIAN	2.8	6.7	47.1	30.1	40.7	63.8	3.4	0.0	0.0	2.7	6.5	3.2	302.8
80 PERCENTILE	.7	.4	20.5	17.8	6.3	18.8	0.0	0.0	0.0	0.0	.9	1.6	148.9
60 PERCENTILE	2.6	4.8	28.6	22.6	27.8	38.3	0.0	0.0	0.0	1.3	4.2	2.5	227.7
40 PERCENTILE	3.6	9.8	56.5	37.1	44.6	94.8	14.7	0.0	0.0	6.1	9.4	4.1	339.3
20 PERCENTILE	5.9	28.6	148.1	64.3	64.4	131.1	29.4	.2	2.3	12.9	14.9	6.1	504.1
MAXIMUM	24.4	209.5	279.2	175.4	165.0	453.6	96.0	43.7	39.5	51.8	18.2	21.8	1049.2
MINIMUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.2

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL

78/02/17.

YELLOWSTONE RIVER AT SIDNEY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	383.4	273.3	733.4	404.0	772.8	1117.5	328.1	67.0	56.2	331.0	355.4	312.8	5134.9
1940	170.2	266.9	304.4	324.5	574.2	1251.4	89.4	0.0	36.4	541.1	301.6	305.1	4165.1
1941	219.7	252.7	366.2	386.3	665.3	1100.7	251.9	227.7	721.4	810.1	558.4	478.3	6038.7
1942	464.4	494.1	887.4	542.8	924.3	1794.6	853.3	238.6	226.2	478.7	499.7	347.8	7751.9
1943	409.2	870.7	1225.8	1036.0	931.4	2574.5	2234.7	576.3	374.9	453.6	491.0	428.8	11606.9
1944	417.8	399.9	1034.9	769.0	851.2	3091.0	1486.4	298.8	290.8	463.9	459.5	325.7	9888.8
1945	425.7	404.3	758.9	391.3	482.4	1652.5	1572.7	424.3	353.7	586.3	519.7	358.4	7930.1
1946	511.8	423.7	689.4	452.2	625.0	1386.5	581.8	115.6	357.1	615.1	524.1	419.2	6701.5
1947	370.3	421.9	1178.3	759.8	1320.0	1659.3	1360.4	382.7	327.7	591.5	555.1	469.7	9396.7
1948	462.8	453.6	784.9	577.0	864.7	2604.1	1080.3	277.3	147.2	433.5	469.9	264.7	8820.0
1949	303.2	333.2	696.2	584.4	809.8	1445.0	481.0	102.5	206.6	431.4	444.3	288.7	6126.3
1950	302.9	398.4	707.3	863.9	552.0	1669.2	1235.6	483.7	373.1	612.5	505.8	491.9	8196.3
1951	475.4	469.7	656.3	651.0	692.3	1302.4	1232.0	636.6	496.9	594.7	584.7	355.1	8147.1
1952	469.3	553.7	754.8	1359.8	1286.0	1757.3	653.4	289.4	227.1	380.8	384.5	334.9	8451.0
1953	399.7	375.5	484.3	306.9	399.6	1606.6	680.1	197.9	135.9	353.3	397.8	342.5	5880.1
1954	200.1	419.2	383.5	465.2	817.7	914.7	847.3	245.3	180.9	383.2	434.5	382.0	5633.7
1955	291.7	275.8	304.5	670.4	623.0	1231.0	520.7	38.5	61.1	376.1	363.1	368.8	5064.7
1956	343.5	295.0	719.3	572.9	1005.7	2101.7	582.8	223.3	225.1	362.5	449.8	350.5	7232.1
1957	351.2	346.1	569.9	570.6	1001.7	2676.6	1288.1	263.5	351.3	485.1	502.1	422.9	8829.0
1958	411.2	350.7	558.4	389.7	789.5	1307.9	483.4	67.9	125.8	369.9	383.5	307.2	5545.1
1959	330.7	330.4	1204.4	427.4	492.9	1698.0	768.5	97.9	164.1	468.8	395.0	442.7	6820.8
1960	242.5	330.7	794.0	422.3	366.0	1011.3	19.6	0.0	72.9	310.2	374.9	254.4	4201.9
1961	289.1	282.9	321.4	136.7	168.7	[illegible].8	0.0	0.0	285.6	545.8	512.7	321.3	3934.0
1962	322.0	533.8	578.7	585.5	1019.5	[illegible].6	1356.8	374.4	352.2	540.0	476.2	421.7	8823.3
1963	392.5	666.3	639.3	427.2	1074.4	2522.6	759.0	147.0	315.8	406.2	450.7	326.5	8127.5
1964	429.8	448.6	439.4	494.4	875.0	2266.0	1614.3	339.8	350.0	414.4	441.2	343.2	8456.1
1965	506.3	493.2	588.6	1260.6	1083.1	2609.1	2333.0	632.8	541.1	696.1	454.0	445.6	11643.4
1966	426.5	420.4	689.9	361.1	547.6	898.0	202.1	7.4	95.4	358.7	407.7	427.7	4832.6
1967	339.0	338.6	422.9	487.1	797.3	2542.5	2458.4	459.8	368.2	576.9	546.8	487.6	9825.1
1968	669.8	633.1	907.0	463.6	548.3	2404.1	1212.1	529.0	616.5	650.6	610.5	488.0	9732.5
1969	549.8	507.8	1123.0	694.3	961.0	1247.9	1137.7	273.7	233.4	466.7	463.2	481.2	8139.7
1970	508.2	548.6	558.5	391.5	1154.3	2387.9	1294.6	299.8	328.7	518.9	507.5	501.9	9000.3
1971	595.7	1040.0	1185.1	934.3	1155.6	2593.2	1453.4	457.8	488.7	877.8	633.2	465.9	11870.7
1972	511.1	633.1	1621.5	680.7	959.9	2066.6	861.8	410.3	447.9	677.5	670.6	436.8	9977.8
1973	573.4	566.5	666.0	596.6	1172.2	1652.8	577.1	275.7	512.3	648.7	666.0	529.9	8437.2
1974	539.5	539.6	601.6	690.8	792.7	2454.8	1605.2	443.2	410.0	568.3	625.8	507.7	9769.4
1975	559.1	441.8	817.2	721.8	1489.9	2221.7	2680.9	690.1	404.8	4.8	14.9	11.0	10057.9
AVERAGE	408.3	455.0	726.4	590.4	828.3	1846.9	1031.8	286.4	304.4	496.9	471.2	386.2	7832.2
MEDIAN	409.2	420.4	689.4	542.8	809.8	1698.0	853.3	273.7	315.8	478.7	469.9	382.5	8139.7
80 PERCENTILE	302.9	330.4	439.4	391.3	548.3	1231.0	481.0	67.9	135.9	376.1	395.0	321.3	5545.1
60 PERCENTILE	370.3	398.4	601.6	463.6	772.8	1652.5	680.1	227.7	227.1	453.6	450.7	355.1	7232.1
40 PERCENTILE	426.5	453.6	719.3	584.4	875.0	2066.6	1212.1	298.8	351.3	541.1	502.1	427.7	8437.2
20 PERCENTILE	508.2	548.6	907.0	694.3	1019.5	2522.6	1453.4	443.2	410.0	612.5	555.1	478.3	9732.5
MAXIMUM	669.8	1040.0	1621.5	1359.8	1320.0	3091.0	2458.4	636.6	721.4	877.8	670.6	529.9	11870.7
MINIMUM	170.2	252.7	304.4	136.7	168.7	898.0	0.0	0.0	36.4	310.2	301.6	254.4	3934.0

2000
RECOMMENDED DEVELOPMENT LEVEL
WITHOUT SRD PROJECTS

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL

78/03/16.

WITHOUT SRD PROJECTS

YELLOWSTONE ABOVE LIVINGSTON

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	82.5	67.9	87.0	150.4	539.5	497.5	312.6	158.2	104.4	102.4	76.4	66.6	2246.2
1940	55.7	53.2	71.2	94.1	455.6	576.2	244.1	115.4	89.9	95.7	78.3	72.3	2004.6
1941	66.0	61.4	66.2	75.5	328.0	428.2	231.0	152.0	160.5	171.7	131.4	110.3	1984.1
1942	87.2	76.0	80.8	157.6	515.6	696.7	468.2	185.5	115.2	99.9	88.9	79.1	2450.6
1943	69.9	62.1	85.6	199.8	426.4	1101.4	816.1	311.2	171.1	128.7	102.5	85.4	3560.1
1944	74.5	66.6	71.9	75.3	295.0	591.8	380.2	170.4	120.2	114.5	94.5	73.9	2133.7
1945	65.4	52.9	65.7	72.2	256.5	644.9	581.6	265.5	169.3	147.4	118.5	93.1	2552.9
1946	86.3	74.1	89.5	200.6	396.3	635.4	524.7	162.7	115.6	114.5	97.7	84.8	2384.1
1947	66.0	62.6	77.8	96.7	539.8	793.2	544.9	267.2	172.5	150.3	116.3	98.1	2985.3
1948	83.9	77.6	80.2	99.5	541.7	1021.4	425.4	220.7	129.2	111.3	93.7	73.5	2958.0
1949	59.5	56.4	64.3	149.4	576.2	739.5	386.5	194.2	127.4	125.2	100.3	73.0	2656.8
1950	55.8	54.8	57.3	93.0	260.5	877.5	694.6	282.0	176.7	164.9	136.9	115.8	2969.7
1951	85.2	76.4	85.4	123.5	515.8	705.0	576.0	326.1	182.0	149.6	114.3	87.3	3027.5
1952	73.0	69.0	75.5	171.4	628.6	835.6	400.9	215.3	125.1	101.2	79.0	72.0	2845.6
1953	73.5	63.2	70.2	83.1	196.7	735.5	455.1	189.7	117.3	101.1	88.7	73.4	2247.4
1954	61.0	56.0	60.6	92.6	494.3	680.0	556.0	229.4	137.5	104.3	89.4	75.6	2636.6
1955	68.9	57.2	71.7	78.0	235.2	607.0	352.9	184.5	115.6	108.3	93.9	85.9	2063.9
1956	85.6	76.7	86.1	130.2	564.5	1098.4	505.6	220.7	129.2	114.7	95.8	80.4	3186.1
1957	66.7	62.1	79.3	75.4	416.2	895.9	490.0	217.8	136.4	118.1	96.0	82.8	2739.6
1958	66.9	61.0	75.2	80.1	471.8	545.5	249.8	148.0	97.6	82.1	84.3	80.6	2043.8
1959	53.5	48.7	62.4	86.1	232.2	955.0	466.5	194.2	124.5	129.8	101.9	91.1	2550.1
1960	80.0	71.7	91.8	118.4	265.5	629.2	248.4	142.8	95.4	94.4	87.7	75.7	1990.9
1961	65.7	60.9	69.4	70.2	259.3	617.1	217.8	120.6	117.0	140.5	120.0	93.9	1952.3
1962	84.0	80.3	91.8	175.7	507.1	906.1	537.9	252.4	144.8	124.2	108.5	96.4	3115.1
1963	66.1	80.0	76.2	85.1	416.0	857.0	412.9	187.9	132.9	114.4	99.9	83.4	2611.7
1964	63.3	55.9	56.0	84.7	362.3	875.6	629.4	255.9	148.7	117.4	102.2	90.9	2842.4
1965	86.3	74.1	81.7	116.9	359.9	1160.1	783.9	323.5	199.9	174.8	129.6	101.8	3592.4
1966	92.0	80.6	81.3	106.6	413.2	530.0	281.5	147.9	110.6	103.6	87.4	77.9	2093.5
1967	75.0	72.0	82.6	84.6	369.7	1122.1	778.5	274.2	151.7	141.7	114.1	93.1	3359.2
1968	80.4	82.5	93.1	96.2	278.5	1039.1	606.0	317.0	220.7	183.1	136.0	106.6	3238.9
1969	88.1	92.0	98.5	145.5	673.9	705.1	488.3	213.7	127.5	123.2	104.1	90.0	2969.8
1970	80.5	75.4	85.5	81.5	409.6	1084.0	599.9	241.1	173.4	147.1	117.7	102.1	3200.5
1971	90.8	91.4	97.1	110.1	482.5	1215.0	805.2	314.5	191.6	162.3	129.5	99.2	3787.2
1972	86.2	81.8	103.9	117.1	424.0	1185.3	559.4	260.0	199.3	191.8	140.7	110.4	3461.7
1973	100.4	86.5	90.8	88.0	355.0	666.6	347.1	185.0	133.2	126.5	112.9	93.1	2382.8
1974	75.8	64.5	82.5	133.1	378.0	1538.1	736.6	292.8	159.2	137.3	104.5	87.8	3592.2
1975	64.8	63.8	85.5	84.2	205.8	819.3	914.0	506.7	178.0	.2	.8	.6	2726.4
AVERAGE	75.1	68.9	79.5	110.8	401.3	822.6	497.5	222.9	143.3	124.8	102.0	85.4	2733.8
MEDIAN	73.8	63.5	80.2	96.2	409.6	739.5	468.5	213.7	132.9	123.2	101.9	85.9	2656.8
50 PERCENTILE	63.5	58.4	69.3	80.1	263.5	607.0	312.6	158.2	115.6	102.4	88.7	73.9	2093.5
60 PERCENTILE	66.3	62.6	75.0	88.0	362.3	696.7	412.9	189.7	127.4	114.5	96.0	82.8	2552.9
40 PERCENTILE	80.4	72.0	86.6	110.1	424.0	875.6	537.9	229.4	144.8	128.7	104.5	90.9	2959.0
20 PERCENTILE	85.3	77.8	89.5	149.4	515.8	1089.0	606.0	274.2	172.5	149.6	116.5	98.1	3200.5
MAXIMUM	100.4	92.0	103.9	200.6	673.9	1538.1	818.1	326.1	220.7	191.8	140.7	115.8	3787.2
MINIMUM	55.8	48.7	56.0	70.2	196.7	429.2	217.8	115.4	89.9	82.1	76.4	66.6	1952.3

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL

73/03/16.

WITHOUT SRD PROJECTS
STILLWATER AT ABSAROKEE

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	14.5	11.7	17.0	20.0	95.7	91.5	60.5	26.0	15.7	18.0	15.0	12.1	403.7
1940	15.2	12.2	11.1	13.1	101.5	204.3	71.0	25.2	24.5	27.4	16.6	16.1	545.1
1941	18.7	11.3	13.2	16.6	88.3	164.2	89.7	52.5	64.7	52.6	30.3	25.2	630.9
1942	25.5	15.2	13.7	30.7	102.0	209.8	201.0	50.5	30.2	32.3	25.9	22.6	760.3
1943	14.8	18.5	28.6	70.5	109.0	284.6	271.5	81.9	52.2	35.3	25.8	20.9	1023.1
1944	13.5	10.1	15.9	18.3	105.0	280.5	220.2	60.8	45.1	33.2	25.8	20.9	849.3
1945	15.3	15.1	13.2	23.0	60.6	211.6	225.2	75.9	43.0	30.6	25.4	19.9	764.7
1946	19.0	15.4	19.5	29.6	60.4	172.4	115.9	39.6	32.7	31.8	24.0	20.5	580.7
1947	19.5	15.2	25.1	34.4	125.6	163.5	192.3	62.3	44.3	43.0	27.5	21.7	796.4
1948	17.2	17.7	21.2	25.5	119.5	274.2	131.0	65.2	28.4	25.8	22.0	18.8	767.4
1949	15.2	10.4	15.1	27.9	115.3	171.8	96.8	37.7	35.0	29.3	22.0	16.5	589.9
1950	11.2	13.8	16.3	20.1	51.7	207.5	187.6	62.9	45.4	38.3	30.0	23.3	708.5
1951	20.8	18.4	19.4	25.9	95.5	137.7	178.9	84.4	36.6	34.6	25.4	19.0	699.1
1952	16.2	14.5	17.5	40.4	138.0	225.0	135.0	71.6	35.1	24.9	22.5	19.4	759.6
1953	17.6	15.1	15.3	19.7	85.9	180.0	136.6	55.5	28.6	21.3	20.7	16.2	574.4
1954	13.8	15.7	19.1	20.0	97.5	125.4	156.6	44.3	23.7	26.1	22.7	16.0	579.8
1955	12.9	12.0	12.7	21.8	47.1	148.8	97.1	36.3	21.7	23.0	18.5	19.0	470.8
1956	17.5	14.5	22.1	26.2	140.3	232.9	106.6	53.1	28.0	23.9	22.2	22.9	710.2
1957	13.4	12.2	14.5	19.4	139.6	342.2	226.9	58.0	40.9	32.9	28.9	24.1	952.7
1958	19.9	19.5	16.3	19.5	146.8	171.1	85.6	51.2	32.5	25.5	24.3	22.7	631.8
1959	18.5	15.1	19.4	24.2	58.4	266.6	128.4	43.6	26.5	31.9	28.1	21.9	680.8
1960	15.2	13.1	15.5	15.3	39.3	148.5	58.4	32.6	18.4	21.5	19.9	17.8	412.4
1961	15.1	14.3	12.5	9.6	55.4	146.9	46.4	27.6	44.9	41.5	32.5	26.6	474.3
1962	20.7	22.4	19.1	33.5	74.8	236.1	152.4	71.1	45.6	37.6	25.0	21.0	759.2
1963	18.4	19.9	15.0	20.3	99.8	265.6	119.2	43.5	41.0	29.5	23.9	17.9	714.1
1964	16.4	15.0	14.5	17.6	69.4	202.4	175.2	42.3	23.3	20.7	23.4	22.9	643.2
1965	20.4	16.5	15.4	25.0	58.0	244.9	204.9	77.9	48.4	39.0	25.6	21.3	800.2
1966	15.3	16.6	15.2	27.4	104.6	137.6	88.4	45.0	29.4	31.4	22.5	19.0	556.5
1967	19.6	15.2	21.0	15.7	73.0	325.0	272.0	63.4	41.1	47.6	29.5	19.3	942.5
1968	19.8	19.2	27.0	21.0	53.7	259.2	168.7	87.0	53.4	39.7	25.6	21.1	786.3
1969	19.9	18.3	18.4	25.5	96.8	172.3	159.9	50.5	25.8	26.6	23.9	18.4	656.2
1970	18.3	18.5	15.8	16.5	120.2	332.7	159.3	50.2	52.4	35.6	26.2	22.7	859.9
1971	22.9	21.5	17.9	27.0	94.5	281.9	187.2	70.8	63.7	44.9	31.8	23.0	887.7
1972	18.9	25.9	38.0	24.9	84.8	238.3	127.2	88.4	63.6	43.7	29.3	22.9	801.8
1973	17.6	16.4	18.2	39.1	112.9	207.5	130.7	47.3	54.1	33.2	24.9	21.2	723.0
1974	20.1	16.9	20.0	28.6	63.4	342.5	225.7	74.8	42.8	33.2	26.4	17.6	911.2
1975	16.1	11.8	18.4	36.2	118.0	271.4	405.7	86.5	35.3	0.0	0.0	0.0	999.3
AVERAGE	17.8	15.6	18.1	25.5	90.3	219.0	156.6	56.5	38.3	31.6	24.2	19.8	713.7
MEDIAN	18.4	15.2	17.5	23.0	95.5	207.5	136.6	52.5	38.6	31.9	25.0	20.9	710.2
80 PERCENTILE	14.3	12.2	14.3	18.3	56.6	148.9	89.7	39.6	25.8	24.9	22.0	17.9	574.4
60 PERCENTILE	17.3	15.0	15.3	20.1	74.8	185.5	128.4	50.2	32.5	29.5	23.9	19.3	656.2
40 PERCENTILE	19.9	15.7	19.2	25.5	99.8	232.9	159.9	60.8	42.8	33.2	25.6	21.2	759.6
20 PERCENTILE	19.9	18.4	20.0	28.8	113.3	274.2	201.0	71.6	48.4	39.0	28.1	22.9	801.8
MAXIMUM	25.5	25.9	34.0	70.5	146.4	342.5	272.0	88.4	64.7	52.6	32.5	26.6	1023.1
MINIMUM	11.2	10.1	11.1	9.6	39.3	91.5	46.4	25.2	15.7	18.0	15.0	12.1	403.7

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 HEDGED DEVELOPMENT LEVEL
WITHOUT SRD PROJECTS
CLARKS FORK OF YELLOWSTONE AT EDGAR

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	24.1	16.4	26.7	35.4	150.1	161.1	76.4	11.9	9.3	22.3	21.4	18.6	583.7
1940	14.5	17.7	20.2	26.0	142.1	144.5	31.0	0.0	13.2	34.4	27.0	26.8	537.2
1941	21.1	17.5	17.1	22.0	117.0	166.9	48.1	30.2	77.2	62.1	39.1	30.8	648.9
1942	24.0	19.6	25.7	41.8	95.9	191.1	126.4	13.5	17.8	30.7	33.2	31.1	649.8
1943	23.4	22.6	34.6	82.7	124.5	322.4	278.8	69.9	34.7	32.4	33.4	27.8	1092.7
1944	22.5	20.5	20.6	19.4	100.5	235.0	132.4	19.3	24.3	30.4	28.5	24.2	682.9
1945	23.4	19.2	23.2	20.4	71.4	239.6	211.4	55.8	29.8	35.4	34.2	27.8	792.1
1946	28.7	21.8	25.2	56.2	92.5	204.1	96.3	18.1	21.0	35.1	30.9	27.5	659.2
1947	20.7	20.6	33.3	28.2	163.7	196.4	137.7	35.1	19.5	35.3	33.1	28.4	752.0
1948	24.6	27.4	25.2	25.7	154.1	293.1	73.3	21.7	14.5	22.4	25.4	21.8	729.2
1949	17.7	17.0	26.2	36.0	158.5	234.9	79.8	10.0	21.8	33.6	30.5	30.4	698.5
1950	23.6	21.6	23.6	27.5	67.5	265.5	222.8	55.3	41.3	55.1	44.5	37.5	885.5
1951	29.6	29.9	31.2	33.5	160.2	199.1	216.3	84.3	37.3	45.6	38.1	26.9	927.1
1952	28.7	28.1	25.6	49.6	146.8	232.5	85.5	40.8	18.0	25.0	26.8	29.7	735.1
1953	24.1	19.9	21.0	24.7	49.2	243.8	125.7	30.0	14.8	18.7	28.7	28.6	634.2
1954	25.5	23.4	22.9	28.6	163.9	179.6	165.4	24.5	17.3	24.2	26.0	27.5	728.5
1955	26.5	23.1	23.5	27.1	64.3	193.2	76.5	15.0	8.3	18.4	27.5	29.4	532.6
1956	32.1	22.5	32.2	38.1	179.6	384.1	112.8	36.9	21.9	21.7	33.0	26.7	891.6
1957	21.7	27.5	25.8	24.1	150.9	340.1	161.0	29.5	33.2	36.7	37.0	31.5	924.6
1958	26.9	21.5	21.5	23.5	187.0	194.9	41.4	22.9	19.5	20.5	30.7	31.2	646.4
1959	24.5	21.7	25.0	29.7	52.5	345.5	136.5	27.7	19.1	41.4	36.3	28.7	789.6
1960	20.1	19.5	29.9	29.8	56.5	216.5	27.4	14.0	5.7	20.7	27.6	24.7	493.0
1961	23.1	19.4	19.0	6.6	83.5	234.4	26.4	3.0	50.5	49.9	35.8	27.1	583.1
1962	20.2	20.7	22.5	52.4	105.0	247.1	117.0	45.5	31.0	33.3	30.8	30.5	798.0
1963	21.4	33.0	25.0	25.0	137.4	245.2	87.9	9.2	31.9	24.7	29.3	24.6	732.6
1964	19.2	18.4	19.9	29.2	115.5	260.3	179.5	19.6	13.0	21.8	31.9	29.1	757.2
1965	27.4	25.9	20.1	34.6	91.9	339.2	199.6	66.6	44.0	45.5	34.9	31.0	959.0
1966	24.6	19.2	23.5	28.1	111.4	167.3	57.6	14.8	20.3	26.4	29.7	27.2	548.1
1967	26.7	21.6	22.1	20.4	109.3	376.5	232.0	41.1	23.9	42.4	37.0	28.9	981.9
1968	26.4	24.5	26.2	21.2	43.5	279.4	120.4	75.0	42.0	37.7	31.9	26.2	752.3
1969	24.7	22.2	22.5	39.7	137.1	193.2	91.1	11.8	12.1	30.1	30.9	28.0	643.4
1970	24.5	22.7	22.0	20.2	136.0	306.1	115.9	17.2	34.5	37.9	31.6	26.3	796.7
1971	24.5	25.5	25.5	28.8	125.1	359.4	170.4	54.6	52.2	51.0	38.3	31.2	993.9
1972	29.5	28.8	37.2	27.6	111.0	378.3	134.4	67.7	51.3	58.2	41.0	29.6	994.6
1973	28.4	25.9	24.8	32.9	100.2	187.0	84.0	21.1	47.5	36.3	37.3	25.5	650.9
1974	30.5	22.5	23.2	34.4	97.1	345.8	180.2	55.9	31.9	29.9	34.3	27.9	965.7
1975	18.5	17.9	32.2	30.0	98.6	253.5	334.5	61.2	26.8	.0	1.0	.6	876.9
AVERAGE	24.1	22.3	25.1	41.4	115.3	236.9	129.7	33.0	28.2	33.1	31.6	27.4	756.1
MEDIAN	24.5	21.6	25.7	28.2	111.4	236.4	117.0	24.5	21.9	33.1	31.9	28.0	732.6
80 PERCENTILE	21.1	19.2	21.0	22.0	71.4	191.1	75.3	13.0	14.5	22.3	27.6	26.2	634.2
60 PERCENTILE	23.9	21.3	23.0	26.0	100.5	218.5	91.1	19.6	19.5	30.1	30.8	27.5	682.9
40 PERCENTILE	24.5	22.7	25.2	29.6	125.1	260.6	132.4	30.2	31.0	35.3	33.2	28.7	757.2
20 PERCENTILE	27.4	25.5	29.7	35.1	154.1	339.2	179.3	53.9	41.5	42.4	37.0	30.5	924.6
MAXIMUM	32.1	33.0	37.2	82.7	187.0	395.8	278.8	84.3	77.2	62.1	44.5	37.5	1092.7
MINIMUM	14.5	16.4	17.1	6.6	43.5	161.1	26.4	0.0	5.7	18.4	21.4	16.6	493.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMEND DEVELOPMENT LEVEL
WITHOUT SRD PROJECTS
YELLOWSTONE RIVER AT BILLINGS

7e/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	136.5	105.7	219.1	254.8	846.9	941.3	420.3	151.7	113.9	170.8	153.6	134.2	3640.7
1940	96.9	161.5	157.5	169.5	704.2	1100.3	288.1	75.5	105.8	207.5	163.8	136.3	3284.6
1941	118.5	113.2	130.3	155.9	551.7	900.0	521.7	195.6	580.9	422.0	257.4	222.4	3600.9
1942	132.2	151.1	245.7	349.5	789.3	1451.9	843.5	236.9	191.9	232.2	230.9	208.0	5111.3
1943	162.2	225.9	331.2	521.5	784.4	2185.1	1585.4	463.9	500.8	249.4	231.1	193.3	7233.6
1944	164.4	140.7	174.2	146.2	511.8	1696.9	981.5	235.7	235.0	235.0	211.2	145.0	4880.4
1945	151.0	127.5	165.8	157.7	454.6	1474.6	1185.2	574.0	245.4	262.9	243.1	170.7	5021.5
1946	200.5	188.3	198.0	329.3	631.0	1225.6	576.5	180.1	200.5	271.6	217.5	182.1	4401.0
1947	163.2	124.2	193.5	272.8	1037.7	1479.7	960.2	358.6	259.3	299.9	243.4	207.0	5605.5
1948	165.5	156.9	200.3	252.8	1030.8	2131.9	714.7	292.4	165.0	206.7	192.7	136.6	5628.4
1949	121.5	133.5	182.9	288.9	940.1	1515.9	523.2	177.8	194.5	244.6	209.2	126.2	4461.3
1950	90.2	117.4	194.8	206.4	525.1	1629.1	1271.4	437.4	279.4	331.9	295.9	251.6	5630.6
1951	175.2	194.1	252.5	270.1	892.4	1220.4	1054.4	551.0	293.3	317.1	271.2	186.4	5663.1
1952	165.1	156.7	187.9	407.6	1229.5	1601.4	684.5	330.7	196.6	192.2	182.3	168.6	5510.1
1953	173.3	181.4	150.0	164.9	525.0	1454.3	790.6	280.2	165.0	176.4	193.4	175.3	4187.9
1954	123.8	150.9	140.3	197.5	841.9	1059.4	902.0	276.4	167.4	189.5	190.8	161.5	4411.4
1955	136.2	115.6	144.0	235.1	849.4	1185.0	569.9	205.9	136.1	187.1	173.0	174.4	3709.3
1956	162.5	146.1	251.2	308.6	1205.7	1902.4	696.8	299.2	196.7	190.3	214.0	179.1	5753.6
1957	102.5	145.7	187.7	186.1	959.1	2233.7	1036.5	285.6	260.6	263.5	238.8	195.7	6093.7
1958	154.4	135.3	159.8	174.3	952.0	1129.4	420.3	193.7	151.9	169.3	201.2	178.9	4025.7
1959	142.3	125.6	179.6	218.4	497.4	1940.5	649.1	239.6	180.8	269.4	234.4	195.6	5069.1
1960	120.1	139.9	179.2	208.2	396.7	1162.9	507.5	169.2	116.9	164.9	184.9	153.3	3303.7
1961	157.8	133.9	125.8	98.0	418.5	1106.1	249.0	96.8	261.5	309.0	276.1	197.6	3395.7
1962	147.2	222.3	213.5	357.8	801.2	1720.2	874.7	380.4	279.4	248.2	219.5	188.8	5655.2
1963	134.7	229.3	164.2	181.7	773.7	1782.0	844.6	206.5	223.7	200.3	203.7	155.7	4900.3
1964	147.4	153.1	150.2	200.9	699.0	1707.8	1113.8	318.4	206.2	189.6	207.8	188.4	5282.6
1965	211.3	186.2	174.3	304.8	680.7	2076.9	1428.7	540.5	387.0	356.0	258.4	202.4	6807.6
1966	182.9	172.4	204.3	233.4	805.5	958.9	436.3	184.5	179.7	213.2	219.3	194.5	3987.0
1967	191.8	165.1	197.5	184.6	673.7	2435.0	1569.4	375.0	226.2	300.5	253.1	198.4	6770.5
1968	169.5	223.3	226.3	219.1	465.9	2022.2	1102.4	541.6	412.3	341.1	278.2	203.5	6204.4
1969	190.5	181.0	225.8	361.6	964.5	1515.2	911.9	257.3	181.9	252.5	228.5	191.8	5253.5
1970	158.1	160.8	168.6	182.2	1005.4	2164.2	940.6	303.7	327.0	302.6	242.2	193.0	6198.6
1971	191.5	228.0	197.2	242.9	890.1	2206.2	1267.6	432.3	375.4	349.3	273.6	204.0	6898.1
1972	164.4	199.9	302.6	234.0	704.5	1947.6	842.1	452.1	377.6	391.1	288.7	203.6	6113.2
1973	194.2	172.5	203.0	289.8	849.3	1245.7	612.7	223.4	307.5	265.3	247.0	202.1	4812.5
1974	192.8	148.5	179.9	274.8	607.9	2427.4	1291.2	466.1	283.6	257.6	248.8	184.3	6562.9
1975	152.0	124.6	215.2	306.0	903.1	1944.8	2251.8	528.5	280.0	0.0	2.9	2.2	6711.2
AVERAGE	155.7	154.0	183.0	247.5	751.5	1680.1	880.4	305.9	239.1	249.3	221.9	178.2	5188.7
MEDIAN	162.2	150.9	187.7	232.8	773.7	1479.7	843.5	280.2	223.7	249.4	226.5	186.4	5111.3
80 PERCENTILE	125.5	127.3	150.6	179.3	497.3	1129.4	436.3	184.5	165.0	189.6	192.7	155.7	3987.0
60 PERCENTILE	147.4	141.4	179.2	206.4	680.7	1316.9	696.8	236.9	196.6	232.2	214.0	179.1	4880.4
40 PERCENTILE	156.4	156.7	197.2	254.8	805.6	1707.8	911.9	303.7	259.3	265.5	238.8	193.3	5605.5
20 PERCENTILE	182.2	188.3	215.5	304.8	952.0	2076.9	1113.8	432.3	300.8	304.0	258.4	202.4	6113.2
MAXIMUM	211.3	229.3	331.2	521.5	1229.5	2435.0	1585.4	551.0	412.3	422.0	295.9	251.6	7233.6
MINIMUM	90.2	104.7	125.5	84.0	325.0	900.0	249.0	75.5	103.8	164.9	153.6	126.2	3284.6

BLANK PAGE

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMND DEVELOPMENT LEVEL
WITHOUT SRD PROJECTS
TONGUE RIVER AT MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	5.3	7.0	33.5	14.5	0.0	47.9	0.0	0.0	0.0	16.3	5.1	6.0	135.6
1940	4.1	5.1	7.5	0.0	0.0	7.9	0.0	0.0	0.0	17.5	4.0	3.9	50.0
1941	5.5	5.5	5.7	0.0	5.1	35.0	0.0	0.0	8.1	30.1	32.7	16.8	136.9
1942	9.2	5.0	23.0	19.1	26.5	97.9	0.0	0.0	0.0	26.5	20.9	16.8	243.5
1943	8.9	15.2	43.6	66.8	34.5	97.9	0.0	0.0	0.0	15.5	27.4	14.8	325.6
1944	7.9	5.2	31.6	25.8	70.5	211.9	87.5	0.0	0.0	13.5	32.4	15.8	499.5
1945	9.2	7.2	21.6	17.3	10.5	115.9	31.5	0.0	0.0	37.5	28.4	13.3	292.3
1946	11.9	9.7	45.6	26.2	25.7	95.2	18.0	0.0	11.2	38.6	31.6	18.9	337.0
1947	21.7	15.5	87.5	43.8	70.8	64.8	30.7	0.0	0.0	15.6	25.5	15.4	396.0
1948	11.8	14.0	43.4	39.3	52.8	71.4	50.0	0.0	0.0	17.0	30.8	8.0	338.4
1949	7.0	5.4	81.1	25.7	35.3	49.9	0.0	0.0	0.0	8.8	24.6	23.3	257.6
1950	7.7	5.0	17.5	20.7	17.0	20.3	0.0	0.0	3.2	19.6	22.1	10.5	144.4
1951	10.1	9.5	10.1	10.7	15.2	15.8	5.8	0.0	17.4	18.7	29.4	9.0	149.6
1952	5.8	6.5	27.6	85.4	49.4	42.6	0.0	0.0	0.0	19.1	11.1	10.0	255.7
1953	8.4	9.2	9.5	5.0	10.1	86.1	0.0	0.0	0.0	14.0	21.3	9.5	170.1
1954	6.2	11.5	19.2	10.0	.1	0.0	0.0	0.0	0.0	5.2	10.5	10.0	63.6
1955	8.7	8.4	12.1	23.5	35.3	55.2	2.6	0.0	0.0	.9	5.6	6.7	151.4
1956	7.1	6.2	25.9	49.3	22.2	43.5	0.0	0.0	0.0	3.1	15.3	11.1	183.7
1957	5.4	4.9	10.9	18.4	13.2	100.4	11.3	0.0	6.0	13.8	7.7	7.4	199.3
1958	7.5	8.5	10.4	5.7	15.8	18.5	10.1	0.0	0.0	11.6	15.1	12.2	114.5
1959	9.4	7.7	87.4	23.5	11.3	4.4	0.0	0.0	0.0	5.4	7.9	10.2	172.2
1960	9.0	8.0	46.1	16.4	0.0	0.0	0.0	0.0	0.0	0.0	3.3	1.7	84.4
1961	2.1	2.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	3.3	2.5	5.5	17.3
1962	5.7	12.3	31.1	35.3	35.2	108.4	1.0	0.0	1.8	13.0	10.1	7.9	258.1
1963	5.5	35.5	28.7	10.4	70.5	155.6	0.0	0.0	.1	.0	2.7	1.8	306.9
1964	6.1	7.0	8.4	14.8	35.4	131.6	34.6	0.0	5.4	11.2	9.6	7.9	272.5
1965	11.0	23.9	35.5	97.4	44.5	64.2	22.6	0.0	7.7	33.7	17.6	8.9	365.0
1966	6.2	5.1	11.9	5.1	0.6	0.0	0.0	0.0	0.0	0.0	3.1	3.6	34.9
1967	6.9	10.2	15.6	17.2	23.2	192.7	45.9	0.0	7.5	11.9	17.0	11.8	359.8
1968	14.6	27.7	44.3	23.5	17.5	147.4	19.6	15.9	24.4	30.7	16.1	9.4	391.0
1969	9.7	9.1	89.5	59.2	52.7	33.3	34.9	0.0	.1	10.0	5.9	10.8	315.1
1970	10.3	11.8	21.5	32.6	79.2	143.1	10.2	0.0	1.6	14.0	14.3	9.8	350.3
1971	8.7	9e.e	105.2	55.2	57.1	85.8	0.0	0.0	2.5	40.2	18.7	9.4	480.5
1972	7.4	15.5	91.6	53.4	33.4	67.7	1.5	0.0	4.7	20.5	17.6	7.5	320.7
1973	11.5	12.6	13.7	15.4	70.6	102.0	5.7	0.0	13.1	26.3	21.0	7.1	298.9
1974	22.9	17.1	15.1	17.3	35.5	62.2	2.4	0.0	0.0	11.5	15.3	16.8	214.5
1975	27.7	7.0	56.5	46.6	96.7	148.9	117.5	26.2	5.8	0.0	0.0	0.0	532.8
AVERAGE	9.2	12.8	34.0	28.0	31.5	73.6	14.7	1.1	5.2	15.5	15.9	10.0	249.2
MEDIAN	7.7	7.7	23.9	19.1	25.7	64.2	1.0	0.0	0.0	14.0	15.5	9.5	255.7
80 PERCENTILE	5.7	5.1	10.2	10.0	5.1	15.8	0.0	0.0	0.0	3.5	5.6	6.7	135.6
60 PERCENTILE	7.1	8.5	15.6	17.2	17.0	47.9	0.0	0.0	0.0	11.9	11.1	8.9	183.7
40 PERCENTILE	8.9	9.7	31.1	25.7	35.6	85.6	5.7	0.0	.1	18.5	17.6	10.2	292.3
20 PERCENTILE	10.5	15.5	45.0	45.0	52.7	106.8	22.6	0.0	6.0	26.3	27.4	14.8	338.4
MAXIMUM	22.9	9e.e	105.2	97.4	74.2	211.9	87.5	15.9	24.4	40.2	32.7	23.3	499.5
MINIMUM	2.1	2.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.7	17.3

STUDY NO. 1

YELLOWSTONE LEVEL 3 OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD PROJECTS
YELLOWSTONE RIVER AT MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	365.5	259.7	462.9	409.5	780.7	1211.8	460.5	179.9	141.2	352.5	330.4	301.3	5252.8
1940	178.9	251.6	250.9	275.9	647.6	1223.6	202.4	11.2	120.8	442.7	303.3	291.2	4230.4
1941	225.7	258.1	328.0	325.7	847.5	1041.4	338.9	242.3	646.9	719.3	521.4	426.1	5701.4
1942	466.2	460.6	648.0	553.1	986.0	1757.3	971.8	526.4	302.7	464.1	443.3	391.7	7775.2
1943	395.5	615.4	852.9	664.2	974.7	2525.9	2103.3	621.0	450.9	481.7	475.2	411.8	10772.6
1944	413.8	575.3	649.1	475.3	815.3	2620.2	1491.5	575.0	377.7	457.9	442.5	323.1	8806.7
1945	411.7	590.9	558.4	534.5	537.4	1704.1	1559.4	517.9	417.4	576.8	512.0	382.8	7903.0
1946	482.0	484.1	541.4	472.2	712.4	1441.2	615.1	245.7	390.8	532.1	456.4	359.8	6693.1
1947	525.5	522.9	592.0	650.5	1292.9	1721.0	1442.1	471.4	411.7	581.4	518.0	450.0	8758.5
1948	458.9	437.0	652.9	481.4	1053.7	2425.3	1028.8	373.0	253.9	434.0	446.8	276.7	8522.4
1949	285.1	340.1	627.9	499.9	976.4	1476.8	580.6	217.9	311.3	447.7	436.1	287.1	6489.1
1950	312.6	370.7	697.9	548.5	614.1	1701.4	1429.7	605.6	466.0	648.2	552.6	490.0	8437.3
1951	461.1	470.2	685.5	487.9	915.1	1435.6	1426.6	751.7	540.7	610.5	558.1	446.5	8787.2
1952	451.4	460.6	664.7	687.4	1383.7	1755.9	800.5	411.1	324.3	417.5	388.2	333.4	8078.5
1953	405.8	556.4	418.8	523.5	439.9	1711.0	800.3	311.1	235.7	377.2	397.2	400.0	6175.6
1954	248.3	329.5	309.7	350.1	696.0	1061.9	930.8	312.4	232.2	393.1	422.7	370.1	5856.8
1955	260.9	273.4	280.5	526.0	634.5	1297.5	563.6	147.7	166.7	385.2	359.5	398.5	5291.6
1956	322.4	306.5	554.5	522.6	1191.6	2096.1	682.9	325.0	295.4	376.6	431.3	526.5	7431.0
1957	521.5	362.9	470.5	542.2	1181.5	2687.6	1394.6	361.5	460.3	505.3	498.5	426.1	9232.5
1958	412.9	594.2	454.2	343.6	975.8	1354.3	524.3	202.6	218.5	370.9	376.0	317.4	5949.7
1959	340.5	332.6	749.7	392.5	568.9	1645.9	630.8	234.4	257.9	476.2	420.5	443.6	6893.3
1960	248.2	292.7	475.4	580.1	444.7	1131.6	149.9	112.1	175.0	328.2	373.9	273.7	4585.6
1961	267.9	277.6	257.0	139.6	328.2	1110.8	107.9	2.4	368.6	542.9	522.1	341.4	4266.7
1962	296.5	436.0	466.8	522.2	921.3	1964.1	1134.1	451.0	428.6	503.1	438.6	391.3	7955.5
1963	574.8	551.6	470.5	538.6	982.1	2074.7	740.2	250.5	377.8	399.9	426.4	334.5	7385.6
1964	397.3	404.7	381.2	456.5	913.8	2086.0	1512.7	401.1	377.8	410.5	425.0	381.4	8154.7
1965	506.5	486.1	520.5	848.7	1025.3	2332.1	1974.6	695.8	637.9	668.0	433.7	412.2	10547.1
1966	374.3	374.3	546.2	367.4	687.8	984.9	511.3	106.0	181.2	535.5	390.4	392.7	5052.6
1967	345.5	425.9	555.6	410.4	776.3	2351.0	2350.2	540.7	406.8	530.0	512.8	492.5	9393.4
1968	620.9	665.5	654.2	450.1	617.9	2506.9	1276.2	622.0	628.2	622.8	545.0	435.2	9427.8
1969	521.9	474.6	632.4	561.0	1059.5	1525.7	1113.9	597.3	525.9	459.3	428.8	456.0	7959.2
1970	494.7	485.7	417.1	330.2	1165.2	2302.7	1385.0	399.2	409.5	515.4	484.3	446.0	8831.7
1971	549.5	955.1	822.0	634.3	1204.4	2361.5	1451.4	564.7	532.2	730.6	589.3	497.7	11095.7
1972	500.1	545.5	1103.9	645.1	965.9	2006.1	957.6	520.6	512.5	661.6	631.3	393.5	9445.4
1973	526.0	529.2	531.4	518.0	1134.1	1514.9	676.5	392.9	507.0	600.2	679.3	520.2	8129.6
1974	527.5	515.9	565.2	635.8	830.7	2533.9	1626.0	545.9	460.1	527.5	586.9	467.5	9821.0
1975	547.7	484.4	693.9	606.4	1327.5	2086.9	2566.6	761.2	412.3	2.7	7.0	4.6	9504.9
AVERAGE	395.9	421.7	556.1	484.9	881.5	1799.3	1067.9	379.1	371.9	483.5	453.2	380.9	7680.9
MEDIAN	395.6	390.9	541.4	475.3	913.6	1721.0	957.6	375.0	377.8	476.2	442.5	392.7	7953.5
80 PERCENTILE	295.1	305.3	381.2	343.6	617.9	1223.6	524.3	202.6	232.2	383.2	390.4	323.1	5701.4
60 PERCENTILE	345.3	362.9	470.5	410.4	786.7	1314.9	800.3	312.4	323.9	447.7	431.3	381.4	7585.6
40 PERCENTILE	412.9	477.0	565.2	516.0	974.7	1964.1	1134.1	399.2	409.3	515.4	475.2	411.8	8154.7
20 PERCENTILE	493.7	484.1	664.7	561.0	1059.5	2332.1	1451.4	540.7	486.0	600.2	522.1	446.5	9232.5
MAXIMUM	620.9	955.1	1103.9	664.2	1383.7	2687.6	2550.2	751.7	646.9	730.6	679.3	520.2	11095.7
MINIMUM	178.9	259.1	257.0	139.6	328.2	984.9	107.9	2.4	120.8	328.2	303.3	273.7	4230.4

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD PROJECTS
POWDER RIVER AT ARVADA

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	8.4	4.0	29.1	10.3	15.4	14.6	0.0	0.0	0.0	5.0	5.3	7.2	99.5
1940	4.5	6.7	17.8	19.4	7.6	14.8	0.0	0.0	0.0	25.6	4.8	6.0	109.0
1941	5.9	5.6	10.8	64.6	73.4	18.3	34.7	44.1	9.2	17.0	14.1	11.8	315.4
1942	5.5	6.7	15.7	29.9	38.4	9.8	0.0	0.0	0.0	6.5	8.3	5.8	127.0
1943	7.2	6.9	33.3	41.4	32.0	44.7	.7	0.0	0.0	3.3	5.9	4.5	191.8
1944	3.1	3.3	8.5	33.2	91.2	86.0	13.8	0.0	0.0	6.6	7.9	7.1	260.6
1945	6.5	8.4	31.2	38.2	29.7	56.5	14.4	2.3	2.3	9.6	11.2	6.3	216.6
1946	9.5	12.0	18.2	23.3	21.2	28.0	11.6	0.0	5.0	9.0	10.2	7.8	155.9
1947	6.0	9.7	57.1	18.6	78.4	38.0	10.1	0.0	0.0	5.4	9.3	6.8	239.3
1948	5.5	12.5	51.8	13.7	24.7	69.9	13.8	0.0	0.0	8.1	8.3	5.4	213.4
1949	4.1	3.8	52.9	18.5	26.0	31.8	0.0	0.0	0.0	5.7	6.0	1.6	150.2
1950	2.2	3.0	12.4	21.4	46.1	11.6	0.0	0.0	0.0	6.3	7.2	2.6	112.8
1951	4.5	4.4	13.5	8.7	11.0	0.0	0.0	0.0	13.5	7.3	6.9	4.8	74.3
1952	2.6	5.4	14.0	21.2	66.0	7.6	.4	0.0	0.0	1.7	4.5	3.1	126.4
1953	3.3	6.2	17.2	9.5	2.2	29.6	0.0	4.8	0.0	.4	3.5	3.6	82.0
1954	3.9	11.3	15.1	15.0	6.5	0.0	0.0	0.0	0.0	.6	4.1	2.3	58.9
1955	2.7	3.2	43.1	29.7	23.1	36.1	0.0	3.0	0.0	1.7	3.0	12.7	158.2
1956	6.3	6.0	36.4	14.2	14.3	8.3	0.0	0.0	0.0	.4	2.8	4.6	94.1
1957	8.0	1.9	12.9	15.0	22.6	58.1	4.4	0.0	0.0	6.2	8.5	7.0	138.5
1958	5.7	4.6	11.7	15.2	22.9	15.2	18.1	0.0	0.0	1.4	5.5	4.3	104.5
1959	8.2	3.5	21.0	10.0	22.8	17.4	2.0	0.0	0.0	2.4	2.9	4.4	90.5
1960	3.3	5.0	36.2	13.7	.9	0.0	0.0	0.0	0.0	.4	2.3	2.0	65.7
1961	2.7	2.9	7.9	5.0	8.8	0.0	0.0	0.0	0.0	9.8	6.5	2.6	46.1
1962	2.4	25.5	14.7	24.1	118.3	190.9	59.3	6.0	6.9	23.6	10.8	9.0	471.4
1963	7.7	14.7	15.3	15.6	28.2	47.9	1.0	0.0	6.2	4.2	7.1	5.1	149.0
1964	5.9	4.3	12.3	27.2	33.2	97.1	10.3	0.0	0.0	2.8	7.0	6.2	206.2
1965	9.2	13.3	24.6	40.3	41.4	59.3	19.0	.9	.8	8.8	8.3	5.4	235.4
1966	4.9	5.5	20.5	15.9	12.2	1.1	0.0	0.0	2.5	3.1	6.6	4.0	76.3
1967	5.0	6.8	12.5	10.5	25.0	155.1	38.2	0.0	2.9	8.6	9.6	5.0	278.8
1968	5.0	7.5	21.5	15.5	39.2	121.8	11.2	3.6	6.8	10.6	9.1	7.3	256.8
1969	9.1	7.0	15.7	14.9	12.9	10.1	.7	0.0	0.0	3.4	7.0	4.8	88.5
1970	6.1	9.1	15.3	12.5	62.2	44.5	2.6	0.0	0.0	5.3	8.3	6.8	173.6
1971	8.8	8.8	36.3	16.6	48.3	49.5	0.0	0.0	0.0	7.2	9.5	6.5	187.5
1972	5.6	32.4	38.0	20.6	43.9	32.4	0.0	3.3	1.4	9.8	9.3	5.0	201.6
1973	5.9	7.5	20.0	34.4	74.1	22.3	16.3	0.0	14.9	13.7	18.6	18.2	250.9
1974	15.3	11.9	16.9	39.5	17.1	5.1	0.0	0.0	0.0	6.1	8.8	6.2	124.9
1975	5.2	5.1	16.0	21.1	36.6	96.9	20.1	0.0	0.0	.4	.6	.4	202.3
AVERAGE	5.5	6.1	23.2	21.6	34.6	41.5	7.8	1.8	2.0	6.7	7.3	5.8	165.7
MEDIAN	5.5	6.7	17.8	18.6	25.0	26.0	.7	0.0	0.0	6.1	7.1	5.4	149.0
80 PERCENTILE	5.3	5.8	12.5	12.5	12.2	7.6	0.0	0.0	0.0	1.7	4.5	3.6	88.5
60 PERCENTILE	4.3	5.5	15.7	14.9	22.8	15.2	0.0	0.0	0.0	5.0	6.6	4.8	124.9
40 PERCENTILE	5.7	7.5	20.5	20.8	32.0	36.1	2.6	0.0	0.0	6.6	8.3	6.2	173.6
20 PERCENTILE	6.5	11.5	36.5	29.9	46.5	58.1	15.8	.9	2.9	9.6	9.5	7.1	235.4
MAXIMUM	15.3	32.4	57.1	64.6	118.3	190.9	59.3	44.1	14.9	25.6	18.6	18.2	471.4
MINIMUM	2.2	1.9	7.9	5.0	.9	0.0	0.0	0.0	0.0	.4	2.3	1.6	46.1

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD PROJECTS
POWDER RIVER AT LOCATE

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	5.1	.4	121.3	18.8	15.0	38.3	0.0	0.0	0.0	0.0	.1	1.7	200.7
1940	0.0	0.0	23.4	20.9	.4	20.4	9.3	0.0	0.0	51.8	4.2	9.0	139.9
1941	4.2	6.7	17.5	56.4	150.4	53.6	15.6	43.7	39.5	34.5	18.0	21.6	463.7
1942	2.3	7.2	56.3	40.1	61.7	57.8	0.0	0.0	0.0	4.8	4.5	6.1	240.9
1943	7.9	209.3	148.1	64.9	34.5	130.4	14.7	0.0	0.0	0.0	4.9	2.3	621.3
1944	.3	0.0	227.5	124.5	165.0	453.6	65.6	0.0	0.0	1.7	6.5	4.5	1049.2
1945	2.5	11.6	56.5	34.3	27.6	131.1	29.8	3.0	2.3	10.9	10.1	5.9	325.7
1946	12.7	10.9	55.5	36.6	50.6	81.9	33.5	0.0	11.9	37.6	15.5	16.4	371.0
1947	11.8	33.9	194.1	62.4	117.0	84.8	26.7	0.0	0.0	2.7	6.1	6.2	545.6
1948	2.7	93.5	202.4	50.1	40.7	110.3	51.6	.6	0.0	7.9	12.6	1.5	556.8
1949	.7	0.0	224.4	40.5	42.1	63.8	0.0	0.0	0.0	4.1	9.5	0.0	385.1
1950	0.0	0.0	0.0	64.5	64.4	37.4	0.0	0.0	0.0	6.1	3.6	4.1	179.9
1951	1.4	2.5	21.5	17.8	5.1	0.0	0.0	3.2	23.6	11.8	15.7	19.7	121.9
1952	1.3	8.1	99.1	105.4	74.4	23.5	0.0	0.0	0.0	0.0	2.3	2.3	319.4
1953	3.8	7.1	27.5	11.6	6.3	92.9	0.0	5.4	0.0	0.0	.6	3.9	159.0
1954	3.5	15.8	20.5	6.5	6.5	0.0	0.0	0.0	1.8	0.0	0.0	1.4	56.0
1955	.3	0.0	28.6	61.0	30.6	43.9	3.4	0.0	0.0	0.0	0.0	.8	188.6
1956	3.6	1.1	69.6	22.6	24.2	24.8	0.0	0.0	0.0	0.0	.2	3.2	148.9
1957	1.6	.4	18.9	13.1	5.5	118.1	10.4	0.0	0.0	2.9	7.6	5.8	180.2
1958	5.9	6.4	13.5	17.1	27.6	35.9	29.4	0.0	0.0	0.0	1.3	4.9	141.9
1959	2.8	2.9	157.3	21.3	15.5	16.8	0.0	0.0	0.0	0.0	2.8	6.3	227.7
1960	2.8	4.8	121.6	21.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	150.1
1961	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.5	0.0	15.2
1962	0.0	72.8	47.1	34.6	117.5	246.3	96.0	3.0	0.0	23.7	12.6	5.9	659.4
1963	5.9	59.3	39.4	20.1	44.1	175.2	23.4	0.0	.5	2.7	7.6	1.8	377.9
1964	3.8	3.0	23.9	27.3	25.2	172.2	42.0	0.0	0.0	0.0	.9	1.8	299.8
1965	5.6	11.4	10.4	175.4	48.7	91.7	20.7	0.0	0.0	11.3	9.4	3.8	389.3
1966	4.5	3.5	23.4	19.4	4.5	0.0	0.0	0.0	0.0	0.0	1.1	1.6	60.2
1967	2.1	6.7	27.8	17.0	53.5	279.6	81.2	0.0	10.7	10.6	12.4	3.0	504.1
1968	2.7	22.0	115.8	25.6	34.7	201.4	18.4	17.6	17.3	12.9	14.9	4.2	487.3
1969	7.5	5.5	131.4	68.7	44.6	12.1	23.7	0.0	0.0	0.0	7.5	1.9	302.8
1970	3.4	10.5	50.3	27.4	94.5	114.6	1.0	0.0	0.0	1.3	9.4	3.2	315.5
1971	1.6	108.9	172.8	64.8	55.9	138.6	0.0	0.0	0.0	49.2	18.2	2.2	612.1
1972	4.1	74.6	279.2	57.1	45.5	74.1	6.6	.2	5.7	15.5	17.8	2.6	563.1
1973	7.6	9.8	32.7	38.9	102.4	83.2	3.1	0.0	26.2	16.1	14.9	4.5	339.3
1974	24.4	28.6	40.8	49.9	43.5	23.5	0.0	0.0	0.0	11.1	15.2	8.5	245.4
1975	7.2	9.3	54.8	45.9	106.3	154.6	72.7	0.0	0.0	0.0	0.0	0.0	450.8
AVERAGE	4.2	23.2	80.2	42.3	48.3	91.7	18.3	2.1	3.8	9.0	7.3	4.6	335.1
MEDIAN	2.8	6.7	47.1	30.1	40.7	63.8	3.4	0.0	0.0	2.7	6.5	3.2	302.8
80 PERCENTILE	.7	.8	20.5	17.8	6.3	18.8	0.0	0.0	0.0	0.0	.9	1.6	148.9
60 PERCENTILE	2.5	4.8	28.6	22.6	27.8	38.3	0.0	0.0	0.0	1.3	4.2	2.5	227.7
40 PERCENTILE	5.5	9.8	56.5	37.1	44.6	84.8	14.7	0.0	0.0	6.1	9.4	4.1	339.3
20 PERCENTILE	5.9	20.6	148.1	64.5	64.4	131.1	29.4	.2	2.3	12.4	14.9	6.1	504.1
MAXIMUM	24.4	209.3	279.2	175.4	165.0	453.6	96.0	43.7	39.5	51.8	18.2	21.8	1049.2
MINIMUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.2

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD PROJECTS
YELLOWSTONE RIVER AT SIDNEY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	581.4	272.0	731.4	404.5	785.2	1130.5	357.5	92.0	71.7	330.1	352.0	310.2	5216.2
1940	168.2	285.5	302.4	324.6	584.6	1264.2	118.6	0.0	51.9	540.2	298.2	302.5	4221.4
1941	217.7	251.4	364.2	386.6	675.7	1113.5	281.5	252.7	737.0	809.2	555.0	475.7	6119.9
1942	462.4	492.6	885.4	543.1	954.7	1807.4	582.7	265.6	241.7	477.8	496.5	345.2	7833.1
1943	407.2	869.4	1225.8	1038.5	941.6	2587.5	2264.1	601.5	390.4	452.7	487.6	426.2	11688.2
1944	415.8	396.5	1032.9	769.5	861.6	3103.8	1515.8	323.8	306.3	465.0	456.1	323.1	9970.0
1945	423.7	403.0	756.9	591.5	492.5	1663.3	1602.1	449.3	369.2	585.4	516.3	355.8	8011.5
1946	509.8	422.4	687.4	452.5	635.4	1399.3	611.2	140.6	372.7	614.2	520.7	416.4	6782.7
1947	368.5	420.6	1175.5	760.1	1330.4	1672.1	1589.8	407.7	343.2	590.6	551.7	467.1	9477.9
1948	460.5	452.3	782.9	577.5	875.1	2616.9	1109.7	302.3	162.7	432.6	466.5	262.1	8501.2
1949	301.2	331.6	694.2	588.7	820.2	1457.8	510.4	127.5	222.1	430.5	440.9	286.1	6207.5
1950	300.9	397.0	705.5	604.2	562.4	1682.0	1265.0	508.7	388.6	611.6	502.4	489.3	8277.5
1951	475.4	468.4	654.5	651.3	702.7	1315.2	1261.4	661.6	512.5	595.6	581.3	352.5	8228.5
1952	467.3	552.4	752.5	1360.1	1295.4	1770.1	682.8	314.4	242.6	379.9	381.1	332.3	8532.3
1953	397.7	374.2	442.3	307.2	410.0	1819.4	709.5	222.9	151.4	352.4	394.4	379.9	5961.3
1954	198.1	417.9	341.5	465.5	828.1	927.6	876.7	270.5	196.5	382.3	431.1	379.4	5714.9
1955	229.7	274.4	302.5	670.7	633.4	1243.8	550.1	63.5	76.6	375.2	359.7	356.2	5145.9
1956	341.5	293.7	717.3	573.2	1016.1	2114.5	612.2	248.5	240.6	361.6	446.4	347.9	7313.4
1957	349.2	344.8	567.9	570.9	1012.1	2689.4	1317.5	288.5	366.8	484.2	498.7	420.3	8910.3
1958	409.2	349.4	556.4	590.0	799.9	1320.7	512.8	92.9	141.3	369.0	380.1	304.6	5626.5
1959	328.7	324.1	1202.4	427.7	503.3	1710.8	797.9	122.9	179.6	467.9	391.6	440.1	6902.1
1960	240.5	329.4	742.0	422.6	575.4	1027.2	49.0	5.4	88.4	309.3	371.5	251.8	4263.5
1961	287.1	281.5	519.4	137.0	179.1	1082.7	2.5	0.0	501.1	544.9	509.3	318.7	3963.4
1962	320.0	532.5	576.7	585.8	1029.9	2275.8	1386.2	399.4	367.7	539.1	472.8	419.1	8904.6
1963	390.5	865.0	637.3	427.5	1064.8	2535.4	788.4	172.0	531.4	405.3	447.3	323.9	8208.8
1964	427.8	447.5	437.4	494.7	885.4	2278.8	1643.7	364.8	365.5	413.5	437.8	340.6	8537.3
1965	504.3	491.9	585.8	1260.9	1093.5	2621.9	2362.4	657.8	556.6	695.2	450.6	443.0	11724.7
1966	424.5	419.1	687.9	361.4	558.9	900.9	231.5	32.4	110.9	357.6	404.3	425.1	4913.8
1967	337.0	337.3	420.9	487.4	807.7	2555.3	2487.8	484.8	383.8	576.0	543.4	485.0	9906.3
1968	667.5	631.8	905.8	465.9	558.7	2416.9	1241.5	553.9	632.1	649.7	607.1	485.4	9813.8
1969	547.8	506.5	1121.0	694.8	971.4	1260.7	1167.1	298.7	248.9	465.8	459.8	478.8	8220.9
1970	506.2	547.3	556.5	391.8	1164.7	2400.7	1324.0	324.4	344.2	518.0	504.1	499.3	9081.6
1971	595.7	1038.7	1185.1	934.6	1166.0	2596.0	1482.8	482.8	504.2	876.9	629.8	463.3	11951.9
1972	509.2	631.8	1619.5	681.0	970.3	2079.4	891.2	435.3	463.5	676.6	667.2	434.2	10059.0
1973	571.4	565.2	664.0	596.9	1182.6	1665.6	606.5	300.7	527.9	647.8	662.6	527.3	8518.4
1974	537.5	538.5	599.6	681.1	803.1	2467.6	1634.6	469.2	425.5	567.4	622.4	505.1	9850.6
1975	557.1	940.5	815.2	722.1	1500.4	2234.5	2710.3	715.1	420.3	3.9	11.6	8.3	10139.1
AVERAGE	406.5	453.6	724.4	590.7	838.7	1659.8	1060.5	309.5	319.9	496.0	467.9	385.5	7910.8
MEDIAN	407.2	419.1	687.4	585.1	820.2	1710.8	882.7	298.7	331.4	477.8	466.5	379.9	8220.9
80 PERCENTILE	300.9	329.1	437.4	391.6	558.7	1245.8	510.4	92.9	151.4	375.2	391.6	318.7	5626.3
60 PERCENTILE	362.5	397.0	599.6	463.9	785.2	1665.3	709.5	252.7	242.6	452.7	447.3	352.5	7315.4
40 PERCENTILE	424.5	452.5	717.5	584.7	885.4	2079.4	1241.5	325.8	366.8	540.2	498.7	425.1	8518.4
20 PERCENTILE	506.2	547.5	905.8	694.8	1029.9	2535.4	1482.8	469.2	425.5	611.6	551.7	475.7	9813.8
MAXIMUM	667.5	1038.7	1619.5	1360.1	1330.4	3103.8	2487.8	661.6	737.0	876.9	667.2	527.3	11951.9
MINIMUM	168.2	251.4	302.4	137.0	179.1	900.9	2.5	0.0	51.9	309.3	298.2	251.8	3963.4

2000

Recommended Development Level

without SRD and Pumping Projects

STUDY NO. 1

YELLOWSTONE LEVEL 4 OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL

76/03/16.

WITHOUT SRD AND PUMPING PROJECTS

YELLOWSTONE ABOVE LIVINGSTON

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	82.5	67.9	87.8	150.4	539.8	497.5	312.6	158.2	104.4	102.4	78.4	66.6	2246.2
1940	58.7	54.2	71.2	94.1	455.6	576.2	244.1	113.4	89.9	95.7	78.3	72.3	2004.6
1941	68.0	61.4	68.2	73.5	328.0	428.2	231.0	152.0	160.5	171.7	131.4	110.3	1984.1
1942	87.2	75.0	80.4	157.6	315.6	696.7	466.2	185.5	115.2	99.9	88.9	79.1	2450.6
1943	69.9	62.1	83.6	199.8	426.4	1101.4	818.1	311.2	171.1	128.7	102.5	85.4	3560.1
1944	74.5	66.6	71.9	78.3	295.0	591.8	380.2	170.4	120.2	114.5	94.5	73.9	2133.7
1945	65.4	52.9	65.7	72.2	256.5	664.9	581.6	265.5	169.3	147.4	118.5	93.1	2552.9
1946	68.3	74.1	89.5	290.6	596.3	635.4	324.7	162.7	115.6	114.5	97.7	84.8	2384.1
1947	66.0	62.6	77.8	96.7	539.9	795.2	584.9	267.2	172.5	150.3	116.3	98.1	2985.3
1948	83.9	77.8	80.2	99.5	541.7	1021.4	425.8	220.7	129.2	111.3	93.7	73.3	2958.0
1949	59.3	56.4	64.3	149.4	576.2	739.5	386.5	194.2	127.4	125.2	100.3	73.0	2656.8
1950	55.6	54.8	57.3	93.0	260.5	877.5	694.6	282.0	176.7	164.9	136.9	115.8	2969.7
1951	85.2	76.4	83.4	123.5	515.6	708.9	576.0	326.1	182.0	149.6	114.3	87.3	3027.5
1952	73.0	64.0	76.6	171.4	629.5	835.6	400.9	213.3	125.1	101.2	79.0	72.0	2845.6
1953	73.5	63.2	70.2	83.1	196.7	750.5	455.1	189.7	117.3	101.1	88.7	73.4	2247.4
1954	61.0	56.0	60.6	92.6	494.3	680.0	556.0	229.4	137.5	104.3	89.4	75.6	2636.6
1955	68.3	57.2	71.7	76.0	235.2	607.0	352.9	189.5	115.6	108.3	93.9	85.9	2063.9
1956	85.3	76.7	85.1	136.2	564.6	1096.4	505.6	220.7	129.2	114.7	95.8	80.4	3186.1
1957	66.7	62.1	74.3	78.4	416.2	895.9	490.0	217.8	136.4	118.1	96.0	82.8	2739.6
1958	66.9	61.0	76.2	80.1	471.9	545.5	249.8	148.0	97.6	82.1	84.3	80.6	2043.8
1959	63.8	64.7	62.4	86.1	232.2	955.0	468.5	194.2	124.5	129.8	101.9	91.1	2558.1
1960	80.0	71.7	91.8	114.4	263.5	629.2	244.4	142.8	95.4	98.4	87.7	75.7	1990.9
1961	65.7	60.9	69.4	70.2	259.3	617.1	217.8	120.6	117.0	140.5	120.0	93.9	1952.3
1962	84.0	86.3	91.8	175.7	507.1	906.1	537.9	252.4	144.8	124.2	108.5	96.4	3115.1
1963	68.1	80.0	78.2	83.1	416.0	857.0	412.9	187.9	132.9	114.4	99.9	83.4	2611.7
1964	65.3	55.9	55.0	84.7	562.3	875.6	629.4	253.9	148.7	117.4	102.2	90.9	2842.4
1965	66.3	74.1	81.7	116.9	359.9	1160.1	783.9	323.5	199.9	174.8	129.6	101.8	3592.4
1966	82.0	68.8	81.3	106.6	418.2	530.0	281.5	147.9	110.6	103.6	87.4	77.9	2093.5
1967	75.0	72.0	82.6	88.6	369.7	1122.1	778.5	274.2	151.7	141.7	114.1	93.1	3359.2
1968	80.4	82.3	95.1	96.2	278.5	1039.1	606.0	317.0	220.7	185.1	136.0	106.6	3238.9
1969	85.1	92.0	98.5	162.3	673.9	705.1	488.3	213.7	127.5	123.2	104.1	90.0	2969.8
1970	80.5	75.4	85.3	91.5	409.6	1089.0	599.9	281.1	173.4	147.1	117.7	102.1	3200.5
1971	90.8	91.4	97.1	110.1	492.6	1213.0	805.2	314.5	191.6	162.3	129.5	99.2	3787.2
1972	88.2	81.8	103.8	117.1	424.0	1185.3	559.4	260.0	199.3	191.8	140.7	110.4	3461.7
1973	100.4	88.3	90.8	88.0	555.3	866.6	347.1	183.0	133.2	126.5	112.9	93.1	2582.8
1974	73.4	68.3	82.6	133.1	376.0	1336.1	736.6	292.8	159.2	137.3	104.5	87.6	3592.2
1975	84.8	63.8	83.3	84.2	203.8	819.3	414.0	306.7	178.0	.2	.8	.6	2726.4
AVERAGE	75.1	68.9	79.5	110.8	401.3	822.6	497.5	222.9	145.3	124.8	102.0	85.4	2733.8
MEDIAN	73.3	64.3	80.2	96.2	409.6	739.5	466.5	213.7	132.9	123.2	101.9	85.9	2656.8
80 PERCENTILE	65.3	58.4	69.3	80.1	263.5	607.0	312.6	158.2	115.6	102.4	88.7	73.9	2093.5
60 PERCENTILE	69.4	62.8	74.8	93.0	362.3	696.7	412.9	189.7	127.4	114.5	96.0	82.8	2552.9
40 PERCENTILE	80.1	72.0	82.6	113.1	424.0	873.6	537.9	229.4	144.8	128.7	104.5	90.9	2958.0
20 PERCENTILE	85.3	77.8	84.5	149.4	515.4	1039.0	606.0	274.2	172.5	149.6	118.5	98.1	3200.5
MAXIMUM	100.4	92.0	103.8	290.6	673.9	1336.1	818.1	326.1	220.7	191.8	140.7	115.8	3787.2
MINIMUM	58.7	48.7	55.0	70.2	196.7	428.2	217.8	113.4	89.9	82.1	78.4	66.6	1952.3

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STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 78/03/16.
2000 RECOMMEND DEVELOPMENT LEVEL

WITHOUT SRD AND PUMPING PROJECTS
STILLWATER AT ABSAROKEE

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	14.3	11.7	17.0	20.0	96.7	91.5	40.5	26.0	15.7	18.0	15.0	12.1	403.7
1940	15.2	12.2	11.1	18.1	101.5	204.3	71.0	25.2	24.5	27.4	18.6	16.1	543.1
1941	18.7	11.3	15.2	15.6	86.8	164.2	69.7	52.5	64.7	52.6	30.3	25.2	630.9
1942	25.5	15.2	15.7	30.7	102.6	206.8	201.0	50.5	30.2	32.3	25.9	22.6	760.3
1943	19.6	16.5	28.6	70.5	104.0	284.6	271.3	81.9	52.2	35.3	25.8	20.9	1023.1
1944	13.5	10.1	15.9	13.5	105.0	280.5	220.2	60.8	45.1	33.2	25.8	20.9	849.5
1945	16.5	15.1	15.2	25.0	90.5	211.6	225.2	73.9	43.0	30.6	25.4	19.9	764.7
1946	19.0	15.4	19.6	29.6	60.4	172.4	115.8	34.6	32.7	31.8	24.0	20.5	580.7
1947	19.6	15.2	25.1	34.4	125.5	185.5	192.5	62.3	44.5	43.0	27.5	21.7	796.4
1948	17.2	17.7	21.2	20.5	119.5	274.2	131.0	65.2	28.4	25.6	22.0	16.8	767.4
1949	15.2	10.4	16.1	27.9	113.3	171.6	96.6	37.7	33.0	29.3	22.0	16.5	589.9
1950	11.2	13.0	15.8	20.1	51.7	207.5	187.6	62.9	45.4	36.3	30.0	23.3	708.5
1951	20.8	18.4	19.9	25.9	95.6	137.7	178.9	64.4	38.6	34.6	25.4	19.0	699.1
1952	16.2	14.3	17.5	40.4	156.0	225.0	135.0	71.6	35.1	24.9	22.3	19.4	759.6
1953	17.3	15.1	15.3	19.7	95.4	180.0	136.6	55.5	28.6	21.3	20.7	18.2	574.4
1954	15.3	15.7	14.1	20.0	97.5	125.4	156.6	44.3	23.7	26.1	22.7	16.0	579.6
1955	12.9	12.0	12.7	21.8	47.1	148.6	97.1	36.5	21.7	23.0	18.5	19.0	470.8
1956	17.3	14.3	22.1	25.2	140.3	232.9	106.6	55.1	28.0	23.9	22.2	22.9	710.2
1957	13.4	12.2	14.5	19.4	134.5	342.2	226.9	58.0	40.9	32.9	28.9	24.1	952.7
1958	19.9	16.3	16.3	19.5	146.8	171.1	85.6	51.2	32.5	25.5	24.3	22.7	631.8
1959	16.5	15.1	19.4	24.2	55.3	266.6	126.4	45.6	26.5	31.9	28.1	21.9	680.8
1960	18.2	15.1	15.5	15.5	39.5	148.5	56.4	32.6	18.4	21.5	19.9	17.6	412.4
1961	15.1	14.3	12.6	8.6	55.4	148.9	46.4	27.6	44.9	41.5	32.5	26.6	474.3
1962	20.7	22.4	19.1	33.5	74.8	236.1	152.4	71.1	45.6	37.6	25.0	21.0	759.2
1963	16.4	19.9	15.0	20.5	99.8	265.8	119.2	43.5	41.0	29.5	23.9	17.9	714.1
1964	16.4	15.0	14.3	17.8	69.4	202.4	175.2	42.3	23.3	20.7	23.4	22.9	643.2
1965	20.4	18.5	16.4	25.0	58.9	244.9	204.9	77.9	48.4	39.0	25.6	21.3	800.2
1966	18.5	16.6	18.2	27.4	104.6	137.6	88.4	43.0	29.4	31.4	22.5	19.0	556.5
1967	19.6	15.2	21.0	15.7	75.0	525.0	272.0	65.4	41.1	47.6	29.5	19.3	942.3
1968	19.8	19.2	27.0	21.0	53.7	250.2	168.7	87.0	53.4	39.7	25.6	21.1	786.3
1969	19.9	16.3	19.4	25.5	98.4	172.3	159.9	50.5	25.8	26.6	23.9	18.4	656.2
1970	14.3	14.5	13.4	16.5	120.2	332.7	159.3	50.2	52.4	35.6	26.2	22.7	859.9
1971	20.9	21.6	17.9	27.6	94.3	281.9	187.2	70.8	65.7	44.9	31.8	23.0	887.7
1972	18.9	25.9	34.0	24.9	84.8	238.3	127.2	88.4	63.6	43.7	29.3	22.9	801.8
1973	17.6	16.4	15.2	34.1	112.9	207.5	130.7	47.3	54.1	33.2	24.9	21.2	725.0
1974	20.1	15.0	20.0	28.8	63.4	342.5	225.7	74.8	42.8	35.2	26.4	17.6	911.2
1975	16.1	11.3	18.4	36.2	118.0	271.4	405.7	86.5	35.3	0.0	0.0	0.0	999.3
AVERAGE	17.3	15.6	18.1	25.3	90.8	219.0	156.6	56.5	38.3	31.6	24.2	19.8	713.7
MEDIAN	18.4	15.2	17.3	23.0	95.6	207.5	136.6	52.5	38.6	31.9	25.0	20.9	710.2
80 PERCENTILE	14.3	12.2	14.5	19.3	56.6	148.9	89.7	39.6	25.8	24.9	22.0	17.9	574.4
60 PERCENTILE	17.6	15.0	16.3	20.1	74.6	185.5	128.4	50.2	32.5	29.5	23.9	19.3	656.2
40 PERCENTILE	19.9	15.7	18.2	25.5	99.8	232.9	159.9	60.8	42.6	35.2	25.6	21.2	759.6
20 PERCENTILE	19.9	18.4	20.0	28.8	113.3	274.2	201.0	71.6	46.8	39.0	28.1	22.9	801.8
MAXIMUM	25.5	25.9	34.0	70.5	156.8	342.5	272.0	88.4	64.7	52.6	32.5	26.6	1023.1
MINIMUM	11.2	10.1	11.1	8.6	39.3	91.5	46.4	25.2	15.7	16.0	15.0	12.1	403.7

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD AND PUMPING PROJECTS
CLARKS FORK OF YELLOWSTONE AT EDGAR

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	24.1	16.4	25.7	35.4	160.1	161.1	76.4	11.9	9.3	22.3	21.4	18.6	583.7
1940	19.5	17.7	20.2	29.0	142.1	188.5	31.0	0.0	13.2	34.4	27.0	26.8	537.2
1941	21.1	17.5	17.1	22.0	117.0	166.9	48.1	30.2	77.2	62.1	39.1	30.8	648.9
1942	24.0	18.6	23.7	41.9	95.9	191.1	128.4	15.5	17.8	30.7	33.2	31.1	649.8
1943	23.9	22.8	34.6	82.7	124.3	322.4	278.6	69.9	39.7	32.4	33.4	27.8	1092.7
1944	22.9	20.5	20.6	19.4	100.5	235.0	132.4	19.3	29.3	30.4	28.5	24.2	682.9
1945	23.9	19.2	23.2	20.4	71.4	239.6	211.4	55.8	29.8	35.4	34.2	27.8	792.1
1946	24.7	21.8	23.2	56.2	92.3	208.1	96.3	18.1	21.0	33.1	30.9	27.5	659.2
1947	20.7	20.6	35.5	28.2	163.7	196.4	137.7	35.1	19.5	35.3	33.1	28.4	752.0
1948	24.6	27.4	25.2	25.7	154.1	293.1	73.5	21.7	14.5	22.4	25.4	21.8	729.2
1949	17.7	17.0	28.2	36.0	158.6	234.9	79.8	10.0	21.8	33.0	30.5	30.4	698.5
1950	23.0	21.6	23.6	27.5	67.6	266.8	222.6	53.3	41.3	55.1	44.8	37.5	885.5
1951	29.6	29.0	31.2	33.5	160.2	199.1	212.3	84.5	57.3	45.6	38.1	26.9	927.1
1952	28.7	28.1	23.6	49.6	146.4	232.5	85.5	40.8	18.0	23.0	26.8	29.7	735.1
1953	24.1	19.9	21.0	24.7	49.2	243.8	125.7	30.0	14.8	18.7	28.7	28.6	634.2
1954	23.5	23.4	22.9	28.0	163.4	179.6	165.4	24.5	17.5	24.2	26.0	27.5	728.5
1955	26.5	25.1	23.5	27.1	64.3	195.2	76.5	13.0	8.3	18.4	27.5	29.4	532.6
1956	22.1	22.3	32.2	38.1	179.6	344.1	112.8	36.9	21.9	21.7	33.0	26.7	891.6
1957	21.7	27.5	25.8	24.1	150.9	346.1	161.0	29.3	33.2	36.7	37.0	31.5	924.0
1958	26.9	21.5	21.6	23.5	187.0	199.9	81.4	22.9	19.5	20.5	30.7	31.2	646.4
1959	24.5	21.7	25.0	29.7	52.5	346.5	136.5	27.7	19.1	41.4	36.3	28.7	789.6
1960	20.1	19.5	28.9	29.6	58.5	216.5	27.4	14.0	5.7	20.7	27.6	24.7	493.0
1961	23.1	19.4	19.0	5.6	83.6	238.4	26.4	3.0	50.8	49.9	35.8	27.1	583.1
1962	20.2	22.7	22.5	52.4	105.0	287.1	117.0	45.5	31.0	33.3	30.8	30.5	798.0
1963	21.4	33.0	25.0	25.0	137.4	245.2	87.9	9.2	31.9	24.7	29.3	24.6	732.6
1964	19.2	19.4	19.9	29.2	113.5	260.3	179.3	19.6	15.0	21.8	31.9	29.1	757.2
1965	27.9	23.9	20.1	34.6	91.9	339.2	199.6	66.6	44.0	45.3	34.9	31.0	959.0
1966	24.6	19.2	23.5	24.1	111.4	167.3	57.6	14.8	20.3	28.4	29.7	27.2	548.1
1967	25.7	21.6	22.1	20.4	109.3	376.5	232.0	41.1	23.9	42.4	37.0	28.9	981.9
1968	25.4	24.3	23.2	21.2	43.6	279.4	120.4	73.0	42.0	37.7	31.9	26.2	752.3
1969	24.7	22.2	22.5	39.7	137.1	195.2	91.1	11.8	12.1	30.1	30.9	28.0	645.4
1970	24.3	22.7	22.0	20.2	136.0	306.1	115.9	17.2	34.5	37.9	31.6	28.3	796.7
1971	24.3	23.5	23.5	25.6	123.1	359.4	178.4	54.6	52.2	51.0	38.3	31.2	993.9
1972	29.5	28.8	37.2	27.6	111.0	378.3	134.4	67.7	51.3	58.2	41.0	29.6	994.6
1973	26.4	25.9	24.8	32.9	100.2	187.0	84.0	21.1	47.5	36.3	37.3	25.5	650.9
1974	30.8	26.3	23.2	36.8	97.1	595.8	180.2	53.9	31.9	24.9	34.3	27.9	965.7
1975	18.5	19.8	32.2	30.0	98.6	253.5	334.5	61.2	26.8	.0	1.0	.8	876.9
AVERAGE	24.1	22.3	25.1	31.4	115.2	239.9	129.7	35.0	28.2	33.1	31.6	27.4	758.1
MEDIAN	24.3	21.6	23.7	28.2	111.4	238.8	117.0	24.5	21.9	33.1	31.9	28.0	732.6
80 PERCENTILE	21.1	19.2	21.0	22.0	71.4	191.1	73.3	13.0	14.5	22.3	27.6	26.2	634.2
60 PERCENTILE	23.9	21.5	23.0	25.0	100.5	216.5	91.1	19.6	19.5	30.1	30.8	27.5	682.9
40 PERCENTILE	24.5	22.7	25.2	29.6	129.1	266.8	132.4	30.2	31.0	35.3	33.2	28.7	757.2
20 PERCENTILE	27.9	25.5	28.7	34.1	154.1	339.2	179.3	53.9	41.3	42.4	37.0	30.5	924.6
MAXIMUM	30.8	33.0	37.2	82.7	187.0	595.8	278.8	84.5	77.2	62.1	44.8	37.5	1092.7
MINIMUM	14.5	15.4	17.1	5.6	43.6	161.1	26.4	0.0	5.7	16.4	21.4	18.6	493.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD AND PUMPING PROJECTS
YELLOWSTONE RIVER AT BILLINGS

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	150.3	103.7	214.1	254.8	848.0	941.3	420.3	151.7	113.9	170.8	155.6	154.2	3640.7
1940	80.4	165.0	137.3	169.3	794.2	1108.3	288.1	75.3	105.8	207.3	165.8	136.3	3284.6
1941	113.3	113.2	130.5	156.4	551.7	980.0	521.7	193.8	580.9	422.0	287.4	222.4	3800.9
1942	182.2	151.1	243.7	349.5	784.5	1451.9	643.3	236.4	191.9	232.2	230.9	208.0	5111.3
1943	162.2	223.9	331.2	521.5	783.4	2186.1	1585.4	465.9	300.8	249.4	231.1	193.3	7233.6
1944	164.4	140.7	179.2	145.2	511.8	1696.9	981.3	235.7	235.0	233.0	211.2	145.0	4880.4
1945	161.0	127.5	166.6	157.7	454.5	1474.6	1183.2	374.0	245.4	262.9	243.1	170.7	5021.5
1946	200.5	188.5	193.0	329.5	631.0	1225.6	576.5	180.1	200.5	271.6	217.5	182.1	4401.0
1947	165.2	129.2	145.5	272.8	1037.7	1479.7	960.2	358.6	259.3	299.9	243.4	207.0	5605.5
1948	165.5	156.4	200.5	252.8	1030.5	2131.9	714.7	292.4	165.0	208.7	192.7	136.6	5626.4
1949	121.5	135.5	182.9	248.9	980.1	1315.4	525.2	177.8	194.5	244.6	209.2	126.2	4461.3
1950	90.2	117.4	194.8	206.4	525.1	1629.1	1271.4	437.4	279.4	331.9	295.9	251.6	5630.6
1951	175.2	194.1	232.5	270.1	892.4	1220.4	1054.4	551.0	293.3	317.1	271.2	186.4	5663.1
1952	165.1	158.7	187.9	407.6	1224.5	1601.4	684.5	330.7	196.6	192.2	182.3	168.6	5510.1
1953	173.3	141.4	150.6	154.9	325.0	1454.3	790.6	280.2	165.0	173.4	193.4	175.3	4187.9
1954	123.8	150.9	140.3	197.5	841.9	1069.4	902.0	276.4	167.4	189.5	190.8	161.5	4411.4
1955	136.2	115.2	144.0	235.1	449.4	1165.0	569.9	205.9	136.1	187.1	173.0	174.4	3709.3
1956	162.5	146.1	251.2	304.6	1206.7	1902.4	696.8	299.2	196.7	190.3	214.0	179.1	5753.6
1957	102.3	143.7	187.7	186.1	954.1	2235.7	1036.5	285.8	260.6	263.5	238.8	195.7	6093.7
1958	154.4	135.5	153.6	179.3	952.0	1129.4	420.3	193.7	151.9	169.3	201.2	178.9	4025.7
1959	142.6	125.6	174.6	214.4	497.3	1980.5	849.1	234.8	180.8	269.4	234.4	195.6	5069.1
1960	120.1	134.9	179.2	205.2	596.7	1152.9	507.5	169.2	116.9	164.9	184.9	153.3	3303.7
1961	137.4	133.9	125.5	84.9	415.5	1106.1	249.0	96.8	261.5	309.0	276.1	197.6	3395.7
1962	147.2	222.3	215.5	357.8	801.2	1726.2	474.7	380.4	279.4	248.2	219.5	188.8	5655.2
1963	154.7	224.3	164.2	181.7	773.7	1782.0	644.8	206.5	223.7	200.3	203.7	155.7	4900.3
1964	147.4	153.1	150.2	200.9	699.0	1707.8	1113.8	318.4	206.2	189.6	207.8	188.4	5282.6
1965	211.5	186.2	174.5	304.8	680.7	2074.9	1428.7	540.5	367.0	356.0	258.4	202.4	6807.6
1966	182.9	172.4	204.5	235.4	805.6	958.9	436.3	184.5	179.7	213.2	219.3	194.5	3987.0
1967	191.8	165.1	197.5	184.8	673.7	2435.0	1569.4	375.0	226.2	300.5	253.1	198.4	6770.5
1968	166.5	223.3	228.5	219.1	465.9	2022.2	1102.4	541.6	412.3	341.1	276.2	203.5	6204.4
1969	180.5	181.0	226.8	361.6	964.5	1315.2	911.9	257.3	181.9	252.5	226.5	191.8	5253.5
1970	158.1	160.8	164.6	182.2	1005.6	2184.2	990.6	303.7	327.0	302.6	242.2	193.0	6198.6
1971	191.5	225.0	197.2	292.9	890.1	2209.2	1267.6	432.3	375.	349.3	273.6	204.0	6898.1
1972	164.4	199.9	302.6	234.0	709.5	1947.6	842.1	452.1	377.6	391.1	286.7	203.6	6113.2
1973	194.2	172.5	203.8	249.8	649.3	1245.7	612.7	223.4	307.5	265.3	247.0	202.1	4812.5
1974	192.8	148.3	174.9	274.8	807.4	2427.4	1291.2	466.1	283.6	257.6	248.8	184.3	6562.9
1975	152.0	124.6	215.2	306.0	905.1	1984.8	2251.8	526.5	280.0	0.0	2.9	2.2	6711.2
AVERAGE	155.7	154.0	195.0	247.5	751.5	1606.1	880.4	305.9	239.1	249.3	221.9	178.2	5188.7
MEDIAN	162.2	150.9	187.7	252.8	775.7	1479.7	843.5	280.2	223.7	249.4	226.5	188.4	5111.3
80 PERCENTILE	125.8	127.5	150.6	179.5	497.3	1129.4	436.3	184.5	165.0	189.6	192.7	155.7	3987.0
60 PERCENTILE	147.4	141.4	174.2	205.4	680.7	1315.9	696.8	236.9	196.6	232.2	214.0	179.1	4880.4
40 PERCENTILE	164.4	154.7	197.2	254.8	805.6	1707.8	911.9	303.7	259.3	265.5	238.8	195.3	5605.5
20 PERCENTILE	182.2	185.3	215.5	304.8	952.0	2076.9	1113.8	452.3	300.8	309.0	258.4	202.4	6113.2
MAXIMUM	211.5	224.3	331.2	521.5	1224.5	2435.0	1585.4	551.0	412.3	422.0	295.9	251.6	7233.6
MINIMUM	85.9	103.7	125.5	84.9	325.0	900.0	249.0	75.3	105.8	164.9	155.6	126.2	3284.6

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD AND PUMPING PROJECTS
TONGUE RIVER AT MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	5.5	7.0	33.5	14.5	0.0	47.9	0.0	0.0	0.0	16.3	5.1	6.0	135.6
1940	4.1	5.1	7.5	0.0	0.0	7.9	0.0	0.0	0.0	17.5	4.0	3.9	50.0
1941	5.5	5.6	3.7	0.0	3.1	35.0	0.0	0.0	8.1	30.1	32.7	16.8	136.9
1942	9.2	5.6	23.0	19.1	20.5	87.9	0.0	0.0	0.0	26.5	28.9	16.8	243.5
1943	8.9	16.2	45.6	66.6	34.5	47.9	0.0	0.0	0.0	15.5	27.4	14.8	325.6
1944	7.8	3.2	31.6	25.6	70.5	211.9	87.5	0.0	0.0	13.5	32.4	15.8	499.5
1945	4.2	7.2	21.6	17.3	10.4	115.9	31.5	0.0	0.0	37.5	28.4	13.3	292.3
1946	11.9	9.7	46.6	28.2	25.7	95.2	18.0	0.0	11.2	36.6	31.6	18.9	337.0
1947	21.7	15.5	87.3	43.6	70.5	69.8	30.7	0.0	0.0	15.6	25.5	15.4	396.0
1948	11.6	14.0	45.4	39.3	52.8	71.4	50.0	0.0	0.0	17.0	30.8	8.0	338.4
1949	7.0	9.4	81.1	25.7	33.8	49.9	0.0	0.0	0.0	8.6	24.6	23.3	257.6
1950	7.7	5.8	17.6	20.7	17.0	20.3	0.0	0.0	5.2	19.6	22.1	10.5	144.4
1951	10.1	9.5	10.1	10.7	13.2	15.8	5.8	0.0	17.4	18.7	29.4	9.0	149.6
1952	5.8	6.5	27.6	63.4	49.4	42.8	0.0	0.0	0.0	19.1	11.1	10.0	255.7
1953	8.4	6.2	7.3	5.0	10.1	86.1	0.0	0.0	0.0	14.0	21.3	9.5	170.1
1954	8.2	11.5	10.2	10.0	.1	0.0	0.0	0.0	0.0	3.2	10.5	10.0	63.6
1955	8.7	2.9	12.1	24.5	35.3	56.2	2.6	0.0	0.0	.9	5.6	6.7	151.4
1956	7.1	6.2	25.9	49.3	22.2	43.5	0.0	0.0	0.0	3.1	15.3	11.1	183.7
1957	5.4	6.9	10.9	18.4	13.2	100.4	11.3	0.0	6.0	13.8	7.7	7.4	199.3
1958	7.5	6.5	10.4	8.7	15.4	18.5	10.1	0.0	0.0	11.8	13.1	12.2	114.5
1959	9.4	7.7	87.4	28.5	11.3	4.4	0.0	0.0	0.0	5.4	7.9	10.2	172.2
1960	9.0	4.0	45.1	16.4	0.0	0.0	0.0	0.0	0.0	0.0	3.3	1.7	84.4
1961	2.1	2.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	3.3	2.5	5.5	17.3
1962	5.7	12.3	31.1	33.3	33.2	108.8	1.0	0.0	1.8	13.0	10.1	7.9	258.1
1963	5.5	35.5	29.7	10.4	70.5	155.8	0.0	0.0	.1	.0	2.7	1.8	306.9
1964	8.1	7.6	4.4	14.8	35.4	151.6	34.0	0.0	5.4	11.2	9.6	7.9	272.5
1965	11.0	23.9	33.5	97.4	44.6	64.2	22.6	0.0	7.7	33.7	17.6	8.9	365.0
1966	8.2	5.1	11.9	5.1	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.6	36.9
1967	8.9	10.2	15.6	17.2	23.2	192.7	45.9	0.0	7.5	11.9	17.0	11.8	359.8
1968	14.6	27.7	44.3	23.5	17.5	147.4	19.6	15.9	24.4	30.7	16.1	9.4	391.0
1969	9.7	9.1	89.3	59.2	52.7	33.3	34.9	0.0	.1	10.0	5.9	10.8	315.1
1970	10.3	11.8	21.3	32.6	79.2	145.1	10.2	0.0	1.6	14.0	14.3	9.8	350.3
1971	8.7	9.8	106.2	53.2	57.1	85.6	0.0	0.0	2.5	40.2	18.7	9.4	480.3
1972	7.4	15.3	91.5	53.4	33.4	67.7	1.5	0.0	4.7	20.5	17.6	7.5	320.7
1973	11.3	12.8	15.7	15.4	70.6	102.0	5.7	0.0	13.1	26.3	21.0	7.1	298.9
1974	22.9	17.1	15.1	17.3	34.6	62.2	2.8	0.0	0.0	11.5	15.3	16.8	214.5
1975	27.7	7.0	56.5	46.6	96.7	138.9	117.5	26.2	5.8	0.0	0.0	0.0	532.8
AVERAGE	9.2	12.4	34.0	28.0	31.5	73.6	14.7	1.1	3.2	15.5	15.9	10.0	249.2
MEDIAN	7.7	7.7	23.0	19.1	25.7	64.2	1.0	0.0	0.0	14.0	15.3	9.5	255.7
80 PERCENTILE	5.1	5.1	10.2	10.0	5.1	15.8	0.0	0.0	0.0	3.3	5.6	6.7	135.6
60 PERCENTILE	7.1	6.5	15.6	17.2	17.0	47.9	0.0	0.0	0.0	11.9	11.1	8.9	183.7
40 PERCENTILE	8.9	9.7	31.1	25.7	33.6	85.6	5.7	0.0	.1	16.3	17.6	10.2	292.3
20 PERCENTILE	10.5	15.3	46.1	45.6	52.7	108.6	22.6	0.0	6.0	26.3	27.4	14.6	338.4
MAXIMUM	22.9	98.8	106.2	97.4	79.2	211.9	87.5	15.9	24.4	40.2	32.7	23.3	499.5
MINIMUM	2.1	2.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.7	17.3

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD AND PUMPING PROJECTS
YELLOWSTONE RIVER AT MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	368.9	254.3	462.5	400.1	788.4	1215.9	467.5	186.6	144.6	351.7	329.5	300.6	5271.6
1940	175.4	253.2	260.3	275.5	849.5	1227.7	209.6	17.8	124.2	441.9	302.4	290.5	4249.2
1941	225.1	237.7	327.3	325.3	689.2	1045.5	346.1	249.0	650.5	716.5	520.5	425.4	5720.2
1942	467.5	460.2	647.6	552.7	987.5	1761.4	979.0	333.1	506.1	463.3	442.4	391.0	7792.0
1943	395.0	615.0	652.5	663.8	976.3	2530.0	2110.5	627.7	454.5	480.9	474.3	411.1	10791.4
1944	413.2	372.9	639.7	474.9	817.9	2624.3	1498.7	381.7	381.1	457.1	441.6	322.4	8825.4
1945	411.1	390.5	555.0	533.9	538.9	1706.2	1366.6	524.6	420.8	576.0	511.1	382.1	7921.7
1946	481.9	443.7	541.0	471.8	714.0	1445.3	622.3	252.4	594.2	531.3	455.5	359.1	6711.9
1947	324.7	322.5	591.6	624.9	1294.0	1725.1	1449.3	478.1	815.1	580.6	517.1	449.5	8777.2
1948	458.5	436.6	652.5	441.0	1055.3	2429.4	1036.0	379.7	257.3	435.2	445.9	276.0	8341.1
1949	264.5	339.7	627.5	494.5	940.0	1480.9	586.0	224.6	314.7	446.9	435.2	286.4	6507.9
1950	312.0	370.5	697.5	544.1	815.7	1705.5	1446.9	612.5	469.4	647.4	551.7	489.3	8456.0
1951	460.5	469.6	564.9	487.5	916.7	1437.7	1433.6	756.4	544.1	609.7	557.2	445.8	8806.0
1952	450.8	460.2	664.3	687.0	1385.3	1760.0	807.5	417.8	527.7	416.7	387.3	332.7	8097.3
1953	405.2	356.0	414.4	322.9	440.4	1715.1	807.5	317.6	239.1	376.4	396.5	349.3	6194.4
1954	287.9	324.9	309.3	349.7	897.5	1066.0	938.0	319.1	235.6	392.5	421.8	369.4	5875.5
1955	260.5	273.0	279.9	525.6	835.9	1301.6	570.6	154.4	170.1	342.4	358.6	397.8	5310.5
1956	321.8	305.9	553.9	522.2	1193.2	2100.2	890.1	329.7	298.8	377.8	430.4	525.8	7449.8
1957	331.2	362.5	470.1	541.8	1182.9	2691.7	1401.8	388.2	465.7	504.5	497.6	425.4	9251.3
1958	412.3	390.8	455.8	345.2	977.4	1358.4	531.5	209.3	221.9	370.1	375.1	316.7	5968.4
1959	339.7	332.2	749.5	592.1	570.9	1850.0	838.0	241.1	261.5	475.4	419.6	442.9	6912.1
1960	247.6	292.5	475.0	379.7	486.4	1135.7	157.1	118.8	178.4	327.4	373.0	273.0	4404.5
1961	267.5	277.4	255.8	139.2	529.9	1114.4	115.1	9.1	372.0	542.1	521.2	340.7	4285.5
1962	295.9	435.6	466.4	521.8	922.9	1968.2	1141.5	457.7	432.0	502.3	437.7	390.6	7972.3
1963	378.2	551.2	470.1	398.2	983.7	2078.8	747.4	257.2	381.2	399.1	425.5	333.8	7404.3
1964	396.7	409.5	380.8	455.9	915.4	2092.1	1519.9	407.8	381.2	409.7	424.1	380.7	8173.5
1965	505.9	485.7	525.9	648.3	1026.9	2330.2	1481.8	702.5	641.3	667.2	432.8	411.5	10565.9
1966	374.2	374.9	545.8	367.0	884.5	989.0	518.5	112.7	194.6	334.7	389.5	392.0	5071.3
1967	342.7	328.5	555.2	410.0	777.9	2555.1	2357.4	547.4	410.2	529.2	511.9	491.8	9412.2
1968	620.3	965.1	655.8	429.7	819.5	2311.0	1283.4	628.6	631.6	622.0	544.1	434.5	9446.6
1969	521.5	479.2	432.0	580.6	1061.1	1329.8	1121.1	404.0	327.3	458.5	437.9	455.3	7978.0
1970	493.1	485.5	415.7	329.8	1166.4	2306.6	1390.2	405.9	412.7	514.6	483.4	445.3	8850.5
1971	548.9	952.7	821.6	639.9	1206.0	2565.6	1458.5	571.4	535.6	729.8	588.4	497.0	11114.4
1972	494.5	584.9	1105.5	644.7	967.5	2012.2	964.8	527.5	515.9	660.8	630.4	392.8	9464.2
1973	525.4	528.8	531.0	517.6	1135.7	1519.0	683.7	399.6	510.4	594.4	678.4	519.5	8148.4
1974	527.0	513.5	562.8	635.4	832.3	2538.0	1533.2	552.5	463.5	526.7	558.0	466.8	9839.7
1975	547.1	488.0	695.5	608.0	1529.1	2091.0	2575.8	767.8	415.7	1.6	0.0	5.8	9525.7
AVERAGE	395.4	421.3	555.6	489.6	885.2	1803.4	1075.1	385.7	375.8	482.6	452.2	380.2	7699.6
MEDIAN	395.0	390.5	541.0	474.9	915.4	1725.1	964.8	381.7	381.2	475.4	441.6	392.0	7972.3
80 PERCENTILE	284.5	305.9	550.6	345.2	819.5	1227.7	531.5	209.3	235.6	382.4	389.5	322.4	5720.2
60 PERCENTILE	342.7	362.5	470.1	419.0	788.4	1519.0	807.5	319.1	327.3	446.9	430.4	380.7	7404.3
40 PERCENTILE	412.5	436.6	562.8	517.6	976.3	1968.2	1141.5	405.9	412.7	514.6	474.3	411.1	8173.5
20 PERCENTILE	493.1	485.7	664.3	590.6	1061.1	2536.2	1458.6	547.4	469.4	599.4	521.2	445.8	9251.3
MAXIMUM	620.3	952.7	1105.5	863.8	1385.3	2691.7	2357.4	758.4	650.3	729.8	678.4	519.5	11114.4
MINIMUM	175.4	237.7	255.8	139.2	529.9	989.0	115.1	9.1	124.2	327.4	302.4	273.0	4249.2

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 DEVELOPED DEVELOPMENT LEVEL
WITHOUT SRD AND PUMPING PROJECTS
POWDER RIVER AT ARVADA

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1937	6.8	4.0	29.1	10.3	13.8	14.8	0.0	0.0	0.0	5.0	5.3	7.2	99.5
1938	4.3	6.7	17.3	19.8	7.6	14.3	0.0	0.0	0.0	25.6	4.8	6.0	109.0
1941	5.4	6.6	10.8	64.6	73.4	18.3	39.7	44.1	9.2	17.0	14.1	11.8	315.4
1942	5.5	6.7	15.7	29.9	34.8	9.8	0.0	0.0	0.0	6.5	8.3	5.8	127.0
1943	7.2	6.9	36.3	41.4	32.0	49.7	.7	0.0	0.0	3.3	5.9	4.5	191.8
1944	5.1	5.3	9.5	33.2	91.2	46.0	13.4	0.0	0.0	6.6	7.9	7.1	260.6
1945	6.5	6.4	31.2	36.2	29.7	56.5	14.4	2.3	2.3	9.6	11.2	6.3	216.6
1946	9.8	12.0	18.2	23.3	21.2	28.0	11.6	0.0	5.0	9.0	10.2	7.8	155.9
1947	6.0	9.7	57.1	18.6	78.4	36.0	10.1	0.0	0.0	5.4	9.3	6.8	239.5
1948	5.5	12.3	51.4	13.7	29.7	49.9	13.8	0.0	0.0	8.1	8.3	5.4	213.4
1949	4.1	3.8	52.9	18.3	28.0	31.8	0.0	0.0	0.0	5.7	6.0	1.6	150.2
1950	2.2	3.9	12.4	21.4	46.1	11.6	0.0	0.0	0.0	6.3	7.2	2.6	112.8
1951	4.3	4.4	13.5	8.7	11.0	0.0	0.0	0.0	13.5	7.3	6.9	4.8	74.3
1952	2.9	5.4	14.0	21.2	56.8	7.6	.4	0.0	0.0	1.7	4.5	3.1	126.4
1953	5.3	6.2	17.2	9.4	2.2	29.6	0.0	4.8	0.0	.4	3.5	3.6	82.0
1954	3.9	11.3	15.1	15.0	8.9	0.0	0.0	0.0	0.0	.6	4.1	2.3	58.9
1955	2.7	3.2	43.1	29.7	23.1	36.1	0.0	3.0	0.0	1.7	3.0	12.7	158.2
1956	6.3	6.8	36.4	19.2	14.3	6.3	0.0	0.0	0.0	.4	2.8	4.6	94.1
1957	4.0	1.9	12.9	13.0	22.0	56.1	4.4	0.0	0.0	6.2	8.5	7.0	138.5
1958	5.7	4.6	11.7	15.2	22.9	15.2	16.1	0.0	0.0	1.4	5.5	4.3	104.5
1959	6.2	3.5	21.0	10.0	22.3	17.4	2.0	0.0	0.0	2.4	2.9	4.4	90.5
1960	3.3	5.0	36.2	13.7	.9	0.0	0.0	0.0	0.0	.4	2.3	2.0	63.7
1961	2.7	2.9	7.9	5.0	8.9	0.0	0.0	0.0	0.0	9.8	6.5	2.6	46.1
1962	2.9	29.5	14.7	28.1	118.3	190.9	39.3	6.0	6.9	23.6	10.8	9.0	471.4
1963	7.7	14.7	13.3	13.6	29.2	47.9	1.0	0.0	6.2	4.2	7.1	5.1	149.0
1964	5.9	4.3	12.3	27.2	33.2	97.1	10.3	0.0	0.0	2.8	7.0	6.2	206.2
1965	7.2	13.3	29.8	40.3	41.4	59.3	19.0	.9	.8	8.8	8.3	5.4	235.4
1966	4.9	7.3	20.5	15.9	12.2	1.1	0.0	0.0	2.5	3.1	6.6	4.0	76.3
1967	5.0	6.4	12.3	10.3	25.0	155.1	38.2	0.0	2.9	8.6	9.6	5.0	278.8
1968	5.0	7.3	21.3	13.3	34.2	121.8	11.2	3.6	6.8	10.6	9.1	7.3	256.8
1969	9.1	7.0	18.7	14.9	12.9	10.1	.7	0.0	0.0	5.4	7.0	4.8	88.5
1970	6.1	9.1	19.3	12.3	62.2	44.5	2.6	0.0	0.0	5.3	8.3	6.8	173.6
1971	4.3	4.3	35.3	16.6	46.3	84.3	0.0	0.0	0.0	7.2	9.5	6.5	187.3
1972	5.6	32.4	38.0	20.6	43.4	32.4	0.0	3.3	1.4	9.8	9.3	5.0	201.6
1973	5.4	7.3	29.0	39.4	74.1	22.3	10.3	0.0	14.9	15.7	16.6	16.2	250.4
1974	15.3	11.4	19.9	39.5	17.1	3.1	0.0	0.0	0.0	6.1	8.8	6.2	124.9
1975	5.2	5.1	19.0	21.1	34.6	96.9	20.1	0.0	0.0	.4	.6	.4	202.3
AVERAGE	5.5	6.1	23.6	21.6	34.5	41.5	7.8	1.6	2.0	6.7	7.3	5.6	165.7
MEDIAN	5.3	6.7	17.3	18.8	25.0	23.0	.7	0.0	0.0	6.1	7.1	5.4	149.0
80 PERCENTILE	6.3	5.8	12.3	12.5	16.2	7.6	0.0	0.0	0.0	1.7	4.5	3.6	88.5
60 PERCENTILE	4.9	5.5	13.7	14.4	22.8	15.2	0.0	0.0	0.0	5.0	6.6	4.8	124.9
40 PERCENTILE	5.1	7.3	28.3	28.8	32.0	36.1	2.8	0.0	0.0	6.6	8.3	6.2	173.8
20 PERCENTILE	5.8	11.3	35.4	29.9	49.3	89.1	13.8	.9	2.9	9.6	9.3	7.1	235.4
MAXIMUM	15.3	32.4	57.1	64.6	118.3	190.9	39.7	44.1	14.9	25.6	16.6	16.2	471.4
MINIMUM	2.2	1.9	7.9	5.0	.9	0.0	0.0	0.0	0.0	.4	2.3	1.6	46.1

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 REQUIRED DEVELOPMENT LEVEL
WITHOUT RED AND STORAGE PROJECTS
POWDER RIVER AT LOCATE

78/03/10.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	5.1	.4	121.3	14.6	15.0	38.3	0.0	0.0	0.0	0.0	.1	1.7	200.7
1940	0.0	0.0	23.4	20.9	.9	20.4	4.3	0.0	0.0	51.8	4.2	9.0	139.9
1941	4.2	6.7	17.5	53.4	150.4	59.6	15.6	43.7	39.5	34.5	18.9	21.8	463.7
1942	2.3	7.2	56.3	40.1	61.7	57.8	0.0	0.0	0.0	4.8	4.5	6.1	240.9
1943	7.9	204.3	148.1	64.9	38.5	130.4	14.7	0.0	0.0	0.0	4.9	2.5	621.3
1944	.3	0.0	227.3	124.5	145.9	453.6	65.6	0.0	0.0	1.7	6.3	4.5	1049.2
1945	2.6	11.6	56.5	34.3	27.8	131.1	29.8	5.0	2.3	10.9	10.1	5.9	325.7
1946	10.7	10.9	55.3	36.8	50.4	81.9	33.5	0.0	11.9	37.6	15.5	16.4	371.0
1947	11.3	31.9	149.1	62.4	117.0	84.6	26.7	0.0	0.0	2.7	6.1	6.2	545.6
1948	2.7	94.3	202.4	30.1	48.7	119.3	51.6	.6	0.0	1.9	12.6	1.5	558.8
1949	.7	0.0	224.4	49.5	42.1	55.8	0.0	0.0	0.0	4.1	9.5	0.0	385.1
1950	0.0	0.0	0.0	94.3	64.4	37.4	0.0	0.0	0.0	4.1	3.6	4.1	179.9
1951	1.4	2.3	21.3	17.8	3.1	0.0	0.0	3.2	23.6	11.8	15.7	19.7	121.9
1952	1.3	6.1	99.1	103.4	74.4	28.5	0.0	0.0	0.0	0.0	2.3	2.3	319.4
1953	3.8	7.1	27.3	11.6	6.3	92.9	0.0	5.4	0.0	0.0	.6	5.9	159.0
1954	3.6	15.4	20.5	6.5	6.5	0.0	0.0	0.0	1.6	0.0	0.0	1.4	56.9
1955	.3	0.0	26.6	81.0	30.6	45.9	3.4	0.0	0.0	0.0	0.0	.8	188.6
1956	3.6	1.1	69.2	22.4	24.2	24.6	0.0	0.0	0.0	0.0	.2	3.2	148.9
1957	1.5	.4	15.4	13.1	5.5	119.1	10.4	0.0	0.0	2.9	7.6	3.8	189.2
1958	5.9	6.4	13.5	17.1	27.6	35.9	29.4	0.0	0.0	0.0	1.3	4.9	141.9
1959	2.4	2.4	157.3	21.3	15.5	16.8	0.0	0.0	0.0	0.0	2.8	6.3	227.7
1960	2.8	4.5	121.2	21.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	150.1
1961	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.5	0.0	15.2
1962	0.0	72.8	47.1	34.0	117.5	240.3	46.0	3.0	0.0	23.7	12.6	5.9	659.4
1963	3.9	94.3	39.4	20.1	48.1	175.2	23.4	0.0	.5	2.7	7.6	1.8	377.9
1964	3.6	3.0	23.9	27.3	25.2	172.2	42.0	0.0	0.0	0.0	.9	1.8	299.8
1965	4.8	11.4	10.4	175.4	48.7	91.7	20.7	0.0	0.0	11.3	9.4	3.8	389.3
1966	4.3	3.5	25.4	14.4	4.3	0.0	0.0	0.0	0.0	0.0	1.1	1.6	60.2
1967	2.1	6.7	27.4	17.9	53.5	274.6	81.2	0.0	10.7	10.6	12.4	3.9	504.1
1968	2.7	92.9	115.4	25.6	34.7	201.4	18.4	17.6	17.3	12.9	14.9	4.2	487.3
1969	7.5	5.5	131.4	68.7	44.6	12.1	23.7	0.0	0.0	0.0	7.5	1.9	302.8
1970	3.4	10.3	50.3	27.4	94.5	114.6	1.0	0.0	0.0	1.3	9.4	3.2	315.5
1971	1.5	100.9	172.8	64.8	55.9	138.6	0.0	0.0	0.0	49.2	18.2	2.2	612.1
1972	4.1	74.8	279.2	47.1	43.5	74.1	6.6	.2	5.7	15.5	17.8	2.8	565.1
1973	7.3	9.9	32.7	38.9	102.4	43.2	3.1	0.0	26.2	16.1	14.9	4.5	339.3
1974	24.4	28.8	40.9	49.9	43.3	23.5	0.0	0.0	0.0	11.1	15.2	8.5	245.4
1975	7.2	9.3	58.4	45.9	196.3	154.6	72.7	0.0	0.0	0.0	0.0	0.0	450.8
AVERAGE	4.2	23.2	89.2	46.3	46.3	91.7	14.3	2.1	3.8	9.0	7.3	4.4	335.1
MEDIAN	2.8	6.7	47.1	30.1	40.7	83.8	3.4	0.0	0.0	2.7	6.5	3.2	302.6
80 PERCENTILE	.7	.8	20.5	17.8	6.3	18.8	0.0	0.0	0.0	0.0	.9	1.6	148.9
60 PERCENTILE	2.5	4.8	29.8	22.6	27.8	38.3	0.0	0.0	0.0	1.3	4.2	2.5	227.7
40 PERCENTILE	3.5	9.8	56.5	37.1	44.4	84.8	14.7	0.0	0.0	6.1	9.4	4.1	339.3
20 PERCENTILE	5.9	26.6	149.1	64.3	84.8	131.1	29.4	.2	2.3	12.9	14.9	6.1	504.1
MAXIMUM	24.4	204.3	279.2	175.4	196.3	453.6	96.0	43.7	39.5	51.8	18.2	21.8	1049.2
MINIMUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.2

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD AND PUMPING PROJECTS
YELLOWSTONE RIVER AT SIDNEY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	580.4	671.5	730.6	404.0	785.9	1136.9	370.5	103.5	78.2	329.1	350.4	308.9	5250.9
1940	167.3	264.9	501.6	324.5	586.3	1270.8	131.7	0.0	56.4	539.2	296.6	301.2	4244.5
1941	216.7	250.7	363.4	386.3	679.4	1120.1	294.3	264.2	743.4	808.2	553.4	474.4	6154.6
1942	461.4	492.1	884.6	542.8	938.4	1814.0	895.7	275.1	246.2	476.8	494.7	343.9	7867.8
1943	405.2	868.7	1223.0	1036.0	945.5	2593.9	2277.1	612.8	396.9	451.7	486.0	424.9	11722.8
1944	414.8	597.9	1032.1	769.0	865.3	3110.4	1528.8	335.3	312.8	462.0	454.5	321.8	10004.7
1945	422.7	402.5	756.1	391.4	496.5	1671.9	1015.1	464.8	575.7	584.4	514.7	354.5	8446.4
1946	508.5	421.7	688.6	452.2	639.1	1405.9	624.2	152.1	379.1	613.2	519.1	415.3	6817.4
1947	367.5	414.9	1175.5	759.8	1334.1	1678.7	1402.8	419.2	349.7	589.6	550.1	465.8	9512.6
1948	459.5	451.5	782.1	577.0	875.8	2023.5	1122.7	313.0	169.2	431.5	464.9	260.8	8535.9
1949	300.2	331.2	693.4	584.4	823.9	1464.4	523.4	139.0	228.6	429.5	439.3	284.8	6242.2
1950	300.0	396.4	704.5	865.9	566.1	1699.6	1278.0	520.2	395.1	610.6	500.8	488.0	8312.2
1951	472.4	467.7	853.5	651.0	709.6	1321.8	1274.4	673.1	518.9	592.8	579.7	551.2	8263.0
1952	466.3	551.7	752.0	1359.8	1300.1	1778.7	695.8	325.9	249.1	576.9	579.5	331.0	8567.0
1953	396.7	373.5	441.3	306.9	413.7	1826.0	722.5	234.4	157.9	351.4	392.8	378.6	5996.0
1954	197.1	417.2	340.7	465.2	831.9	934.2	889.7	281.8	202.9	581.3	429.5	378.1	5749.6
1955	228.7	274.8	301.7	670.4	637.1	1250.4	563.1	75.0	85.1	374.2	358.1	364.9	5180.6
1956	340.5	295.0	716.5	572.9	1019.5	2121.1	625.2	259.8	247.1	360.6	444.8	346.6	7348.1
1957	348.2	344.1	567.1	570.6	1015.8	2696.0	1330.5	300.0	373.3	483.2	497.1	419.0	8945.0
1958	408.2	348.7	553.6	389.7	803.4	1527.3	525.8	104.4	147.8	368.0	378.5	303.3	5661.0
1959	327.7	526.4	1201.8	427.4	507.8	1717.4	810.9	134.4	186.1	466.9	390.0	436.8	6936.8
1960	234.5	524.7	791.2	422.5	389.1	1033.8	62.0	16.9	94.9	306.3	369.9	250.5	4298.2
1961	248.2	280.9	518.8	136.7	182.8	1089.5	15.5	0.0	307.8	543.9	507.7	317.4	3986.6
1962	319.1	531.8	575.9	585.5	1033.5	2282.0	1399.2	410.9	574.2	538.1	471.2	417.8	8939.3
1963	389.5	464.3	636.5	427.2	1084.5	2542.0	801.4	183.5	537.9	404.3	445.7	322.6	8243.4
1964	423.5	440.6	436.6	494.4	869.1	2265.4	1056.7	376.5	372.0	412.5	436.2	339.3	8572.0
1965	503.3	491.2	585.8	1260.6	1097.2	2628.5	2375.4	669.3	563.1	694.2	449.0	441.7	11759.4
1966	423.5	418.4	687.1	361.1	561.7	907.5	244.5	43.4	117.4	356.8	402.7	425.8	4948.5
1967	536.0	536.6	820.1	487.1	811.8	2561.9	2500.8	496.5	390.2	575.0	541.8	483.7	9941.0
1968	666.8	631.1	904.2	463.6	562.4	2423.5	1254.5	565.5	638.5	648.7	605.5	484.1	9848.4
1969	548.4	505.8	1120.2	694.3	975.1	1267.5	1180.1	319.2	255.4	464.8	458.2	477.5	8255.6
1970	505.2	548.6	555.7	391.5	1168.4	2407.3	1337.0	336.5	350.7	517.0	502.5	498.0	9116.5
1971	592.7	1039.0	1182.5	934.5	1169.7	2602.6	1495.8	494.3	510.7	875.9	628.2	462.0	11986.6
1972	508.1	631.1	1618.7	680.7	974.0	2086.0	904.2	446.8	469.9	675.6	665.6	432.9	10093.7
1973	570.4	564.5	863.2	596.6	1186.3	1672.2	619.5	312.2	534.3	646.8	691.0	526.0	8553.1
1974	536.5	547.0	598.8	680.8	806.5	2474.2	1647.6	479.7	452.0	566.4	620.8	503.8	9885.3
1975	556.1	439.5	614.4	721.8	1504.0	2241.1	2723.3	726.6	426.8	2.8	10.0	7.0	10175.8
AVERAGE	405.4	454.0	723.6	590.4	842.4	1856.4	1073.5	320.4	326.4	495.0	466.3	382.3	7944.9
MEDIAN	405.2	416.4	686.8	542.8	823.9	1717.4	895.7	310.2	337.8	476.8	464.9	378.6	8255.6
80 PERCENTILE	300.0	524.4	835.6	391.5	562.4	1250.4	523.4	104.4	157.9	374.2	390.0	317.4	5661.0
60 PERCENTILE	397.5	496.4	698.8	465.6	786.4	1671.9	722.3	264.2	249.1	451.7	445.7	351.2	7348.1
40 PERCENTILE	423.5	451.6	719.5	584.4	889.1	2089.0	1254.5	335.3	373.3	534.2	497.1	425.8	8553.1
20 PERCENTILE	505.2	548.4	904.2	698.5	1038.4	2542.0	1495.8	479.7	452.0	610.6	550.1	474.4	9848.4
MAXIMUM	666.8	1039.0	1618.7	1359.8	1334.1	3110.4	2500.8	673.1	743.4	875.9	665.6	526.0	11986.6
MINIMUM	167.3	250.7	501.6	136.7	182.8	907.5	15.5	0.0	56.4	306.3	296.6	250.5	3986.6

2000
Recommended Development Level
without SRD and Storage Projects

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD AND STORAGE PROJECTS

78/03/16.

YELLOWSTONE ABOVE LIVINGSTON

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	62.0	67.7	87.5	150.4	540.1	497.9	316.4	161.4	106.5	102.3	75.9	66.3	2254.3
1940	56.4	55.0	70.4	94.1	455.9	575.6	247.9	118.6	92.0	95.6	77.8	72.0	2012.7
1941	67.7	61.2	67.4	73.5	328.3	426.6	234.8	155.2	162.6	171.6	130.9	110.0	1992.2
1942	86.9	75.6	80.5	157.6	313.9	697.1	472.0	188.7	117.3	94.8	88.4	78.8	2458.7
1943	69.5	61.4	83.3	199.8	426.7	1101.8	621.9	314.4	173.2	128.6	102.0	85.1	3568.2
1944	74.2	68.4	71.6	78.3	295.5	592.2	384.0	173.6	122.3	114.4	94.0	73.6	2141.8
1945	65.1	52.7	65.4	72.2	258.6	665.5	585.4	268.7	171.4	147.3	118.0	92.8	2561.0
1946	86.0	73.9	89.2	200.6	396.6	635.8	328.5	165.9	117.7	114.4	97.2	84.5	2392.2
1947	65.7	62.4	77.5	96.7	540.1	795.6	548.7	270.4	174.6	150.2	115.8	97.8	2993.4
1948	83.6	77.6	79.9	99.5	582.0	1021.8	429.2	225.9	131.3	111.2	93.2	73.0	2966.1
1949	59.2	56.2	69.0	149.4	578.5	739.9	390.3	197.4	129.5	125.1	99.8	72.7	2664.9
1950	55.5	54.6	57.0	93.0	260.3	877.9	698.4	285.2	178.8	164.8	136.4	115.5	2977.8
1951	84.9	76.2	85.1	123.8	516.1	708.4	579.6	329.3	184.1	149.5	113.8	87.0	3035.6
1952	72.7	66.6	79.5	171.4	628.9	836.0	404.7	216.5	127.2	101.1	78.5	71.7	2853.7
1953	73.2	63.6	69.9	95.1	197.0	735.9	456.9	192.9	119.4	101.0	88.2	73.1	2255.5
1954	60.7	55.4	60.5	92.6	494.6	680.4	559.8	232.6	139.6	104.2	88.9	75.3	2644.7
1955	68.5	57.0	71.4	78.0	235.5	607.4	356.7	192.7	117.7	108.2	93.4	85.6	2072.0
1956	85.5	75.5	85.5	130.2	564.9	1096.8	509.4	225.9	131.3	114.6	95.3	80.1	3194.2
1957	66.4	61.9	79.0	78.4	413.5	896.3	493.8	221.0	138.5	118.0	95.5	82.5	2747.7
1958	66.6	60.6	75.9	80.1	472.1	545.9	253.6	151.2	99.7	82.0	83.8	80.3	2051.9
1959	63.5	68.5	82.1	85.1	232.5	955.4	472.3	197.4	126.6	129.7	101.4	90.8	2566.2
1960	79.7	71.5	91.5	114.4	263.8	629.6	248.2	146.0	97.5	94.3	87.2	75.4	1999.0
1961	65.4	60.7	69.1	70.2	259.6	617.5	221.6	123.8	119.1	140.4	119.5	93.6	1960.4
1962	83.7	86.1	91.5	175.7	507.4	906.5	541.7	255.6	146.9	124.1	108.0	96.1	3123.2
1963	65.5	79.5	77.9	85.1	416.3	857.4	416.7	191.1	135.0	114.3	99.4	83.1	2619.8
1964	69.2	55.7	55.7	84.7	362.6	876.0	633.2	257.1	150.8	117.3	101.7	90.6	2850.5
1965	86.0	73.9	81.4	116.9	360.2	1160.5	787.7	326.7	202.0	174.7	129.1	101.5	3600.5
1966	91.7	66.4	81.0	106.6	418.5	530.4	285.3	151.1	112.7	103.5	86.9	77.6	2101.6
1967	74.7	71.6	82.3	84.6	370.0	1122.5	782.3	277.4	153.8	141.6	113.6	92.8	3367.3
1968	80.1	82.1	92.8	96.2	278.8	1039.5	609.5	320.2	222.8	183.0	135.5	106.3	3247.0
1969	87.5	91.8	98.2	165.5	674.2	705.5	492.1	216.9	129.6	125.1	103.6	89.7	2977.9
1970	80.2	75.2	83.0	81.5	409.9	1089.4	603.7	244.3	175.5	147.0	117.2	101.8	3208.6
1971	90.5	91.2	96.8	110.1	482.9	1215.4	809.0	317.7	193.7	162.2	129.0	98.9	3795.3
1972	87.9	81.6	103.5	117.1	424.3	1185.7	563.2	265.2	201.4	191.7	140.2	110.1	3469.8
1973	100.1	86.1	90.5	88.0	355.3	667.0	350.9	186.2	135.3	126.4	112.4	92.8	2390.9
1974	75.5	64.1	82.5	133.1	378.3	1338.5	740.4	296.0	161.3	137.2	104.0	87.5	3600.3
1975	69.5	65.6	83.0	84.2	204.1	819.7	917.8	311.9	180.1	.1	.3	.3	2734.5
AVERAGE	78.3	68.7	79.0	110.8	401.6	822.9	501.4	226.2	145.3	124.7	101.5	85.0	2742.0
MEDIAN	73.5	64.1	79.9	96.2	409.9	739.9	472.3	216.9	135.0	123.1	101.4	85.6	2664.9
80 PERCENTILE	65.2	58.2	69.0	80.1	263.8	607.4	316.4	161.4	117.7	102.3	88.2	73.6	2101.6
60 PERCENTILE	68.5	62.4	76.3	88.0	362.6	697.1	416.7	192.9	129.5	114.4	95.5	82.5	2561.0
40 PERCENTILE	80.1	71.6	82.3	110.1	424.3	876.0	541.7	232.6	146.9	126.6	104.0	90.6	2966.1
20 PERCENTILE	85.3	77.5	89.2	149.4	516.1	1089.4	609.8	277.4	174.6	149.5	118.0	97.8	3208.6
MAXIMUM	100.1	91.8	103.5	200.6	674.2	1338.5	821.4	329.3	222.8	191.7	140.2	115.5	3795.3
MINIMUM	55.5	44.3	55.7	70.2	197.0	428.6	221.6	116.5	92.0	82.0	75.9	66.3	1960.4

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL
WITHOUT SRD AND STORAGE PROJECTS

76/03/16.

STILLWATER AT ABSAROKEE

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	14.5	11.7	17.0	20.9	96.7	91.5	60.5	26.0	15.7	18.0	15.0	12.1	403.7
1940	13.2	12.2	11.1	19.1	101.3	204.3	71.0	25.2	24.5	27.4	18.6	16.1	543.1
1941	13.7	11.3	13.2	16.3	86.9	164.2	84.7	52.5	64.7	52.6	30.3	25.2	630.9
1942	25.5	15.2	15.7	30.7	102.0	206.8	201.0	50.5	30.2	32.3	25.9	22.6	760.3
1943	14.5	14.3	28.6	70.3	109.0	289.6	271.5	81.9	52.2	35.3	25.8	20.9	1025.1
1944	13.6	10.1	15.9	16.5	105.0	280.5	220.2	60.8	45.1	33.2	25.8	20.9	849.5
1945	18.3	15.1	19.2	23.0	60.4	211.6	225.2	73.9	43.0	30.6	25.4	19.9	764.7
1946	19.0	15.4	14.5	29.6	60.4	172.4	115.8	39.6	32.7	31.8	24.0	20.5	580.7
1947	19.6	15.2	25.1	38.4	125.6	185.5	192.5	62.3	44.3	43.0	27.5	21.7	796.4
1948	17.2	17.7	21.2	26.5	114.5	274.2	131.0	65.2	28.4	25.8	22.0	18.8	767.4
1949	15.2	10.4	15.1	27.9	113.3	171.8	96.8	37.7	33.0	29.3	22.0	16.5	589.9
1950	11.2	13.8	16.8	20.1	51.7	207.5	187.6	62.9	45.4	36.3	30.0	23.3	708.5
1951	20.5	14.4	14.9	25.9	95.4	137.7	178.9	84.4	38.6	34.6	25.4	19.0	699.1
1952	16.2	14.3	17.5	40.4	150.0	225.0	135.0	71.6	35.1	24.9	22.3	19.4	759.6
1953	17.4	15.1	15.3	19.7	45.9	180.0	136.6	55.5	28.6	21.3	20.7	18.2	574.4
1954	13.8	13.7	18.1	20.0	97.5	123.4	156.6	44.3	23.7	26.1	22.7	16.0	579.8
1955	12.9	12.0	12.7	21.8	47.1	148.8	97.1	36.3	21.7	23.0	18.5	19.0	470.8
1956	17.6	14.5	22.1	26.2	140.5	232.9	106.6	55.1	28.0	25.9	22.2	22.9	710.2
1957	13.4	12.2	14.3	19.4	139.6	342.2	226.9	58.0	40.9	32.9	28.9	24.1	952.7
1958	19.9	16.5	16.3	19.5	146.8	171.1	85.6	51.2	32.5	25.5	24.3	22.7	631.8
1959	18.6	15.1	19.4	24.2	56.5	266.6	128.4	43.6	26.5	31.9	28.1	21.9	680.8
1960	18.2	13.1	13.5	13.5	39.3	144.5	56.4	32.6	18.4	21.5	19.9	17.8	412.4
1961	15.1	14.3	12.6	8.6	55.4	148.9	46.4	27.6	44.9	41.5	32.5	26.6	474.3
1962	20.7	22.4	19.1	33.3	74.4	236.1	152.4	71.1	45.6	37.6	25.0	21.0	759.2
1963	16.4	19.9	15.0	20.3	99.4	265.8	119.2	45.5	41.0	29.5	23.9	17.9	714.1
1964	16.4	15.0	14.5	17.6	69.4	202.4	175.2	42.3	23.3	20.7	23.4	22.9	643.2
1965	20.4	18.5	16.4	25.0	53.0	244.9	204.9	77.9	48.4	39.0	25.6	21.3	800.2
1966	14.3	15.6	15.2	27.4	104.4	137.6	88.4	43.0	29.4	31.4	22.5	19.0	550.5
1967	17.6	15.2	21.0	15.7	73.0	325.0	272.0	63.4	41.1	47.6	29.5	19.3	942.3
1968	19.4	19.2	27.0	21.0	55.7	250.2	168.7	87.0	53.4	39.7	25.6	21.1	786.3
1969	19.9	18.3	18.4	25.3	96.8	172.3	159.9	50.3	25.8	26.6	23.9	18.4	656.2
1970	18.3	14.5	13.4	19.5	120.2	332.7	159.3	50.2	52.4	35.6	26.2	22.7	859.9
1971	22.9	21.6	17.9	27.6	94.5	281.9	187.2	70.8	63.7	44.9	31.8	23.0	887.7
1972	18.9	25.9	34.0	24.9	84.8	259.3	127.2	86.4	65.6	45.7	29.3	22.9	801.8
1973	17.6	16.4	18.2	39.1	112.9	207.5	130.7	47.3	54.1	33.2	24.9	21.2	723.0
1974	20.1	16.0	20.0	26.8	63.4	342.5	225.7	74.8	42.8	33.2	26.4	17.6	911.2
1975	16.1	11.8	16.4	36.2	118.0	271.4	405.7	86.5	35.3	0.0	0.0	0.0	999.3
AVERAGE	17.3	15.8	19.1	25.3	90.8	219.0	156.6	56.5	38.3	31.6	24.2	19.8	713.7
MEDIAN	16.4	15.2	17.5	23.0	95.6	207.5	136.6	52.3	36.6	31.9	25.0	20.9	710.2
80 PERCENTILE	14.3	12.2	14.3	19.3	56.6	148.9	89.7	39.6	25.6	24.9	22.0	17.9	574.4
60 PERCENTILE	17.5	15.0	15.3	20.1	74.9	185.5	128.4	50.2	32.5	29.5	23.9	19.3	656.2
40 PERCENTILE	18.9	15.7	19.2	25.5	99.5	232.9	159.9	60.8	42.8	33.2	25.6	21.2	759.6
20 PERCENTILE	19.9	18.4	20.0	28.8	113.5	274.2	201.0	71.6	48.4	39.0	28.1	22.9	801.8
MAXIMUM	25.5	25.9	34.0	70.3	146.8	342.5	272.0	86.4	64.7	52.6	32.5	26.6	1023.1
MINIMUM	11.2	10.1	11.1	8.6	39.3	91.5	46.4	25.2	15.7	18.0	15.0	12.1	403.7

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL
WITHOUT SRD AND STORAGE PROJECTS
CLARKS FORK OF YELLOWSTONE AT EDGAR

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	23.5	19.0	25.2	35.6	160.4	161.4	84.9	19.1	13.7	22.2	20.4	17.8	601.2
1940	15.7	17.3	19.7	26.2	142.4	134.8	39.5	3.1	17.6	34.3	26.0	26.0	550.6
1941	20.5	16.9	16.6	22.2	117.3	167.2	56.6	37.4	81.6	62.0	38.1	30.0	666.4
1942	24.4	14.2	23.2	42.0	96.2	191.4	136.9	20.7	22.2	30.6	32.2	30.3	667.3
1943	23.3	22.3	38.1	82.9	124.6	322.7	287.3	77.1	44.1	32.3	32.4	27.0	1110.2
1944	22.2	20.1	20.1	19.6	100.9	235.3	140.9	26.5	33.7	30.3	27.5	23.4	700.4
1945	23.3	14.8	22.7	20.6	71.7	239.9	214.9	63.0	34.2	35.3	33.2	27.0	809.6
1946	26.1	21.4	28.7	56.4	92.6	209.4	104.8	25.5	25.8	35.0	29.9	26.7	676.7
1947	20.1	20.2	32.6	28.4	164.0	196.7	146.2	42.3	23.9	35.2	32.1	27.6	769.5
1948	28.0	27.0	28.7	25.9	154.4	293.4	81.8	28.9	18.9	22.3	24.4	21.0	746.7
1949	17.1	16.6	27.7	35.2	158.6	263.2	86.3	17.2	26.2	33.5	29.5	29.6	716.0
1950	25.0	21.2	25.1	27.7	67.9	267.1	231.3	60.5	45.7	55.0	43.8	36.7	903.0
1951	29.0	29.6	30.7	33.7	160.5	199.4	220.8	91.5	41.7	45.5	37.1	26.1	944.6
1952	26.1	27.7	25.1	49.8	147.1	232.8	96.0	48.0	22.4	22.9	25.8	28.9	752.6
1953	26.5	19.5	20.3	24.9	49.5	244.1	134.2	37.2	19.2	18.6	27.7	27.8	651.7
1954	24.7	23.0	22.4	26.8	164.1	179.9	173.9	31.7	21.7	24.1	25.0	26.7	746.0
1955	25.7	22.7	25.0	27.5	64.6	193.5	85.0	20.2	12.7	18.3	26.5	28.6	550.1
1956	21.5	22.1	31.7	36.3	179.9	344.4	121.3	44.1	26.3	21.6	32.0	25.9	909.1
1957	21.1	27.1	25.3	24.3	151.2	346.4	169.5	36.5	37.6	36.6	36.0	30.5	942.1
1958	26.5	20.9	21.1	23.7	187.5	200.2	49.9	30.1	23.9	20.4	29.7	30.4	663.9
1959	23.9	21.5	24.5	29.9	52.4	346.8	145.0	34.9	23.5	41.3	35.3	27.9	807.1
1960	19.5	18.9	28.4	29.8	58.8	216.8	35.9	21.2	10.1	20.6	26.6	23.9	510.5
1961	22.3	19.0	18.5	5.8	83.9	238.7	34.9	10.2	55.2	49.8	34.8	26.3	600.6
1962	19.5	22.5	22.0	52.6	105.3	287.4	125.5	52.7	35.4	33.2	29.8	29.7	815.5
1963	20.5	32.6	22.5	25.2	137.7	235.5	96.4	16.4	36.3	28.6	28.3	25.8	750.1
1964	18.6	16.0	19.4	29.4	115.8	260.6	187.6	26.8	17.4	21.7	30.9	28.3	774.7
1965	27.3	23.5	19.6	34.5	92.2	339.5	208.1	73.8	48.4	45.2	33.9	30.2	976.5
1966	24.0	18.8	23.0	24.5	111.7	167.6	66.1	22.0	24.7	28.3	28.7	26.4	565.6
1967	26.1	21.2	21.5	20.6	109.6	376.8	240.5	48.3	28.5	42.3	36.0	28.1	999.4
1968	25.9	23.4	25.7	21.4	43.9	274.7	128.9	80.2	46.4	37.6	30.9	25.4	769.8
1969	24.1	21.6	22.0	34.9	137.4	193.5	99.6	19.0	16.5	30.0	29.9	27.2	660.9
1970	23.7	22.3	21.5	20.4	136.3	306.4	124.4	24.4	38.9	37.8	30.6	27.5	814.2
1971	25.7	24.9	24.5	29.0	125.4	359.7	186.9	61.8	56.6	50.9	37.3	30.4	1011.4
1972	25.9	28.4	36.7	27.6	111.5	376.6	142.9	74.9	55.7	58.1	40.0	28.8	1012.1
1973	27.5	25.5	24.3	33.1	100.5	187.3	92.5	28.3	51.9	36.2	36.3	24.7	668.4
1974	30.2	21.9	24.7	36.6	97.4	394.1	188.7	61.1	36.3	29.8	33.3	27.1	983.2
1975	17.9	19.4	31.7	30.2	96.9	253.8	345.0	68.4	31.2	0.0	.0	.0	894.5
AVERAGE	23.5	21.9	24.5	31.5	115.5	257.2	136.3	40.2	32.6	33.0	30.6	26.6	775.4
MEDIAN	23.7	21.4	23.2	28.4	111.7	238.7	125.5	31.7	26.3	35.0	30.9	27.2	750.1
80 PERCENTILE	20.5	18.3	20.5	22.2	71.7	191.4	81.8	20.2	18.9	22.2	26.6	25.4	651.7
60 PERCENTILE	23.3	20.9	22.5	25.2	100.8	219.8	99.6	25.8	23.9	30.0	29.8	26.7	700.4
40 PERCENTILE	24.9	22.3	24.7	29.8	125.4	267.1	140.9	37.4	35.4	35.2	32.2	27.9	774.7
20 PERCENTILE	27.3	24.9	29.2	33.3	154.4	339.5	187.8	61.1	45.7	42.3	36.0	29.7	942.1
MAXIMUM	30.2	32.6	38.7	82.9	187.4	394.1	287.3	91.5	81.6	62.0	43.8	36.7	1110.2
MINIMUM	14.7	14.2	16.6	5.8	43.9	161.4	34.9	3.1	10.1	18.3	20.4	17.8	510.5

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 PROJECTED DEVELOPMENT LEVEL
WITHOUT SRD AND STORAGE PROJECTS
YELLOWSTONE RIVER AT BILLINGS

76/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	135.3	109.1	215.5	258.9	845.5	941.9	432.7	162.2	120.4	170.5	152.2	133.1	3666.3
1940	90.1	133.2	138.3	164.6	704.8	1106.4	300.5	81.7	110.3	207.0	162.4	135.2	3306.1
1941	117.5	112.0	127.4	154.0	552.1	909.6	534.1	204.5	387.4	421.7	296.0	221.3	3826.5
1942	161.4	150.5	242.9	489.9	740.1	1452.5	855.9	247.4	198.4	231.9	229.5	206.9	5130.9
1943	161.8	223.5	330.4	521.6	745.4	2186.7	1597.6	474.4	307.3	249.1	229.7	192.2	7259.2
1944	143.5	140.1	178.4	146.3	512.8	1697.5	993.7	246.2	241.5	232.7	209.8	143.9	4990.6
1945	150.2	120.9	145.0	157.8	455.2	1475.2	1195.6	384.5	251.9	262.6	241.7	164.6	5047.1
1946	199.7	187.7	197.2	329.4	651.6	1226.2	588.9	190.6	207.0	271.3	216.1	181.9	4426.6
1947	142.9	127.6	194.7	272.9	1038.9	1480.3	972.6	364.1	265.8	294.6	242.0	205.9	5631.1
1948	164.9	156.3	199.3	252.9	1031.8	2132.5	727.1	302.9	171.5	206.4	191.3	135.5	5654.0
1949	120.7	132.9	182.1	289.0	940.7	1319.5	535.6	188.3	201.0	244.3	207.8	125.1	4486.9
1950	89.4	116.8	194.0	205.5	525.7	1629.7	1283.8	447.9	285.9	331.6	294.5	250.5	5656.2
1951	174.8	148.5	231.7	273.2	893.0	1221.0	1066.8	561.5	299.8	316.8	269.8	185.3	5688.7
1952	164.5	156.1	187.1	407.7	1230.1	1602.0	701.9	341.2	203.1	191.9	180.9	167.5	5535.7
1953	173.0	140.8	149.4	185.0	325.4	1454.9	805.0	290.7	171.5	173.1	192.0	174.2	4213.5
1954	125.0	150.3	134.5	197.6	842.5	1070.0	914.4	286.9	173.9	184.2	189.4	160.4	4437.0
1955	135.4	114.6	145.2	235.2	450.6	1183.8	582.3	216.4	142.6	186.8	171.6	173.3	3734.9
1956	161.7	145.5	250.4	308.7	1207.4	1903.0	709.2	309.7	203.2	190.0	212.6	178.0	5779.2
1957	101.7	146.1	186.9	186.2	959.7	2234.3	1048.9	296.3	267.1	265.2	237.4	194.6	6119.3
1958	153.5	134.9	159.0	179.4	952.6	1130.0	432.7	204.2	158.4	169.0	199.8	177.8	4051.3
1959	141.9	125.0	178.8	214.3	497.9	1941.1	861.5	250.3	187.3	269.1	233.0	194.5	5094.7
1960	114.3	134.3	175.4	205.3	397.3	1165.5	519.9	179.7	123.4	164.6	193.5	152.2	3329.3
1961	136.6	135.3	125.0	84.1	419.1	1106.7	261.4	107.3	268.0	308.7	274.7	196.5	3421.3
1962	146.4	221.7	214.7	357.9	601.8	1720.6	887.1	390.9	285.9	247.9	218.1	187.7	5680.8
1963	153.9	225.7	165.4	181.8	774.3	1782.8	857.2	217.0	230.2	200.0	202.3	154.6	4925.9
1964	146.6	152.5	149.4	201.0	699.4	1703.4	1126.2	328.9	212.7	189.3	206.4	187.3	5306.2
1965	210.7	165.6	173.7	304.9	681.3	2077.5	1441.1	551.0	393.5	355.7	257.0	201.3	6833.2
1966	192.1	171.8	204.5	235.5	809.2	959.5	448.7	195.0	186.2	212.9	217.9	193.4	4012.6
1967	191.0	164.5	196.7	184.9	674.3	2435.6	1561.8	385.5	232.7	300.2	251.7	197.3	6796.1
1968	165.7	222.7	227.5	219.2	866.5	2022.8	1114.8	552.1	418.8	340.8	276.8	202.4	6230.0
1969	179.7	180.4	228.0	361.7	964.1	1315.8	924.5	267.8	188.4	252.2	227.1	190.7	5279.1
1970	157.3	160.2	167.8	182.3	1006.2	2164.6	1003.0	314.2	333.5	302.3	240.8	191.9	6224.2
1971	190.7	227.4	198.4	283.0	890.7	2205.8	1280.0	442.8	381.9	349.0	272.2	202.9	6923.7
1972	165.3	149.5	301.6	254.1	710.1	1948.2	854.5	462.6	384.1	390.8	287.3	202.5	6138.8
1973	193.8	171.9	202.2	289.9	849.9	1246.3	625.1	233.9	314.0	265.0	245.6	201.0	4838.1
1974	192.0	147.9	179.1	274.9	804.5	2428.0	1305.6	476.6	290.1	257.3	247.4	183.2	6588.5
1975	151.2	124.0	214.4	306.1	905.7	1945.4	2264.2	539.0	286.5	0.0	1.5	1.1	6737.1
AVERAGE	154.9	157.5	192.2	247.6	752.1	1608.7	892.8	316.3	245.5	249.1	220.5	177.1	5214.2
MEDIAN	161.4	150.3	186.9	252.9	774.3	1480.3	855.9	290.7	230.2	249.1	227.1	187.3	5136.9
80 PERCENTILE	125.0	126.9	149.6	174.4	497.3	1130.0	448.7	195.0	171.5	189.3	191.3	154.6	4012.6
60 PERCENTILE	145.5	140.8	175.4	205.5	681.3	1519.5	709.2	247.4	203.1	231.9	212.6	178.0	4906.0
40 PERCENTILE	165.3	156.1	198.4	254.9	806.2	1709.4	964.3	314.2	265.8	263.2	237.4	192.2	5631.1
20 PERCENTILE	181.8	187.7	214.7	304.9	952.6	2077.5	1126.2	442.8	307.3	308.7	257.0	201.5	6138.8
MAXIMUM	210.7	227.7	330.4	521.6	1230.1	2435.6	1597.8	561.5	418.8	421.7	294.5	250.5	7259.2
MINIMUM	89.1	109.1	125.0	84.1	325.4	900.4	261.4	81.7	110.3	164.6	152.2	125.1	3306.1

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 PROJECTED DEVELOPMENT LEVEL
WITHOUT SRD AND STORAGE PROJECTS
FLOWS GIVEN AT MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	4.4	6.7	33.5	14.1	0.0	50.1	0.0	0.0	0.0	15.6	4.5	5.6	134.9
1940	5.7	8.6	7.5	0.0	0.0	10.1	0.0	0.0	0.0	10.5	3.4	3.5	49.7
1941	3.4	5.5	5.5	0.0	5.5	37.2	0.0	0.0	10.3	20.4	32.1	16.4	141.2
1942	5.8	9.3	22.6	18.7	28.4	99.1	0.0	0.0	0.0	25.8	28.3	18.4	245.2
1943	8.5	15.4	43.4	66.4	36.9	100.1	0.0	0.0	0.0	14.8	20.8	14.4	327.3
1944	7.0	8.9	31.4	25.4	72.9	214.1	92.3	0.0	0.0	12.8	31.8	15.4	506.1
1945	8.3	8.9	21.4	15.9	12.9	113.1	36.3	0.0	2.0	36.6	27.8	12.9	300.8
1946	11.0	9.4	46.4	27.8	23.1	97.4	26.8	0.0	13.4	37.9	31.0	48.5	345.7
1947	21.3	13.2	87.1	45.4	73.2	72.0	35.5	0.0	.2	14.9	24.9	15.0	402.7
1948	11.4	15.7	43.2	36.9	55.2	73.6	58.8	0.0	0.0	16.3	30.2	7.6	345.0
1949	6.5	5.1	80.9	25.3	36.2	52.1	0.0	0.0	0.0	6.1	24.0	22.9	259.3
1950	7.5	5.5	17.4	20.3	19.4	22.5	1.6	0.0	5.4	18.9	21.5	10.1	149.9
1951	9.7	9.2	9.9	10.3	15.6	16.0	10.6	.4	19.6	18.0	28.8	8.6	158.7
1952	5.4	6.2	27.4	63.0	51.9	45.0	0.0	0.0	0.0	18.4	10.5	9.6	257.4
1953	8.0	5.9	9.5	8.4	12.5	38.3	0.0	0.0	0.0	13.3	20.7	9.1	171.8
1954	7.8	11.2	10.0	9.6	2.5	.7	0.0	0.0	0.0	2.5	9.9	9.6	63.9
1955	8.4	2.6	11.9	23.1	37.7	57.4	7.4	0.0	0.0	.2	5.0	6.3	170.0
1956	6.7	5.9	23.7	48.9	24.6	45.7	0.0	0.0	0.0	2.4	14.7	10.7	185.4
1957	5.0	4.6	10.7	18.0	13.6	102.6	16.1	0.0	8.2	13.1	7.1	7.0	208.0
1958	7.1	8.2	10.2	6.3	18.2	20.7	14.9	0.0	0.0	11.1	12.5	11.8	121.1
1959	9.0	7.4	87.2	29.1	13.7	6.6	0.0	0.0	2.2	4.7	7.3	9.8	176.1
1960	8.5	7.7	43.9	16.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	1.3	82.2
1961	1.7	2.4	1.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.9	5.1	14.8
1962	5.3	12.0	30.9	32.9	35.6	111.0	5.8	0.0	4.0	12.3	9.5	7.5	266.8
1963	5.1	35.2	24.5	10.0	72.3	156.0	3.5	0.0	2.3	0.0	2.1	1.4	315.0
1964	5.7	7.3	5.2	14.4	37.8	133.8	39.4	.6	7.6	10.5	9.0	7.5	281.8
1965	10.6	23.6	33.3	97.0	47.0	66.4	27.4	0.0	9.9	33.0	17.0	8.5	373.7
1966	5.3	4.8	11.7	4.7	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.2	32.7
1967	8.5	9.9	13.4	13.8	25.6	198.9	50.7	0.0	9.7	11.2	16.4	11.4	368.5
1968	14.6	27.8	84.1	23.1	19.9	149.6	24.4	20.2	26.6	30.0	15.5	9.0	404.0
1969	9.3	8.8	89.3	58.8	55.1	35.5	39.7	0.0	2.3	9.3	5.3	10.4	323.8
1970	9.4	11.5	21.3	32.2	81.6	147.3	15.0	0.0	3.8	15.3	13.7	9.4	359.0
1971	8.8	95.5	108.0	54.8	59.9	87.8	0.0	0.0	4.7	39.5	18.1	9.0	484.3
1972	7.0	13.2	91.4	55.0	35.4	59.9	6.3	.5	6.9	19.8	17.0	7.1	329.9
1973	11.1	12.3	15.5	15.0	75.0	104.2	10.5	0.0	15.3	25.6	20.4	6.7	307.6
1974	22.5	19.3	14.9	15.9	36.9	64.8	7.6	0.0	.7	10.8	14.7	10.8	221.7
1975	27.5	8.7	56.3	46.2	99.1	151.1	122.3	30.5	8.0	0.0	0.0	0.0	547.5
AVERAGE	8.3	12.2	43.8	27.6	33.5	75.6	17.4	1.4	4.4	14.9	15.4	9.6	254.6
MEDIAN	7.3	7.4	22.6	18.7	28.1	66.4	5.8	0.0	.7	13.3	14.7	9.1	257.4
80 PERCENTILE	5.3	4.8	10.0	9.6	5.5	16.0	0.0	0.0	0.0	2.6	5.0	6.3	134.9
60 PERCENTILE	6.7	6.2	15.4	15.8	19.4	50.1	0.0	0.0	0.0	11.2	10.5	8.5	185.4
40 PERCENTILE	8.3	9.4	30.9	29.3	36.0	87.8	10.5	0.0	2.3	15.6	17.0	9.8	300.8
20 PERCENTILE	9.9	15.2	49.9	49.4	55.1	111.0	27.4	0.0	8.2	25.6	24.8	14.4	345.7
MAXIMUM	22.5	95.5	108.0	97.0	81.6	214.1	92.3	30.5	26.6	39.5	32.1	22.9	506.1
MINIMUM	1.7	2.4	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.3	14.8

BLANK PAGE

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 REVISED DEVELOPMENT LEVEL
WITHOUT SRD AND STORAGE PROJECTS
YELLOWSTONE RIVER AT MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	391.0	250.6	459.5	597.2	793.1	1239.0	511.3	227.4	165.2	345.1	523.0	295.7	5374.4
1940	175.8	250.4	277.4	273.0	654.2	1250.9	253.6	54.6	144.8	433.2	295.9	285.5	4548.0
1941	221.2	233.0	324.3	322.6	659.3	1063.7	390.1	289.9	673.1	711.9	514.0	420.4	5828.0
1942	463.7	457.3	644.3	549.6	494.7	1784.5	1025.0	373.9	326.7	456.7	455.9	386.0	7897.0
1943	391.1	612.3	844.4	860.9	963.4	2553.2	2154.4	868.5	474.9	474.3	467.8	406.1	10496.4
1944	409.3	370.6	536.7	472.0	625.0	2647.5	1547.4	422.5	401.7	450.4	435.1	317.4	8935.2
1945	407.2	387.7	555.0	341.6	548.0	1731.5	1615.3	565.4	443.4	569.4	504.5	377.2	8033.4
1946	477.5	441.0	535.0	488.9	721.2	1458.5	871.1	293.2	417.0	524.6	449.0	354.1	6824.1
1947	320.3	319.6	369.6	627.0	1501.1	1746.2	1498.0	519.9	435.8	573.9	510.6	444.3	8887.0
1948	454.4	435.9	649.3	474.1	1062.5	2452.5	1084.7	420.3	277.9	426.5	439.4	271.0	8450.9
1949	290.5	357.0	629.4	495.3	997.1	1504.0	832.0	265.4	535.3	440.3	428.7	281.4	6612.9
1950	309.1	367.3	594.3	545.2	622.8	1726.6	1482.4	853.1	492.2	640.6	545.2	484.3	8564.7
1951	456.6	467.0	691.9	434.6	925.8	1460.9	1482.5	799.6	560.8	603.1	550.7	440.8	8918.3
1952	449.9	457.3	661.3	688.1	1592.4	1755.1	851.5	458.6	348.3	410.0	380.8	327.7	8202.3
1953	401.3	353.3	413.4	320.0	447.3	1736.2	851.4	558.6	259.7	369.8	389.7	344.4	6299.4
1954	244.0	325.2	305.3	346.8	904.7	1097.6	982.0	359.9	256.2	385.7	415.3	364.5	5979.3
1955	256.4	270.3	275.9	522.7	845.0	1524.7	819.5	195.2	140.7	375.8	352.1	392.8	5420.1
1956	317.9	305.2	550.8	519.5	1200.5	2123.3	734.0	370.5	319.3	371.1	423.9	320.8	7556.5
1957	317.3	354.8	467.1	536.9	1190.9	2713.8	1450.6	429.0	486.5	497.8	491.1	420.5	9363.4
1958	405.4	396.1	450.7	540.3	984.5	1381.5	580.2	250.1	242.5	363.5	368.6	311.7	6076.1
1959	535.8	524.5	745.5	389.2	977.7	1875.2	882.0	282.0	244.1	468.7	413.1	437.9	7019.5
1960	243.7	284.6	471.9	576.8	951.1	1156.7	189.2	159.6	199.0	321.5	366.5	268.1	4493.7
1961	263.8	274.7	253.0	136.7	534.4	1135.9	147.2	49.9	392.6	535.5	514.7	335.8	4374.7
1962	292.0	452.9	455.4	514.9	930.0	1991.3	1190.0	498.6	454.8	495.7	431.2	385.6	8084.4
1963	574.9	546.4	467.1	595.3	990.4	2102.0	794.3	298.0	404.0	393.2	419.0	328.8	7515.7
1964	392.8	406.6	577.6	453.0	922.5	2115.3	1568.7	449.2	404.0	403.0	417.6	375.7	8286.2
1965	502.0	485.0	522.9	845.4	1034.0	2359.5	2030.5	743.4	664.0	660.6	426.3	406.5	10677.9
1966	570.3	571.2	542.8	364.1	694.2	1004.9	362.4	155.5	205.2	326.7	383.0	387.0	5172.5
1967	555.8	520.6	552.1	407.1	785.0	2376.3	2406.1	586.2	433.0	522.6	505.4	486.9	9524.3
1968	616.4	660.4	953.5	426.6	626.6	2334.1	1332.1	673.8	654.4	615.4	537.6	429.5	9562.9
1969	517.4	476.5	629.0	557.7	1066.2	1552.9	1169.8	444.6	350.1	451.9	421.4	450.3	8090.0
1970	484.6	482.3	413.7	320.9	1173.9	2330.0	1438.9	446.8	435.5	508.0	476.8	440.3	8962.6
1971	545.0	450.0	618.6	838.0	1213.1	2398.7	1502.6	612.2	556.4	725.2	581.8	492.0	11221.6
1972	493.5	542.1	1100.3	641.8	974.3	2035.3	1013.6	569.7	536.7	654.1	623.9	387.8	9576.7
1973	521.3	526.1	525.0	514.7	1142.8	1542.1	732.4	440.4	533.1	592.7	671.8	514.5	8260.1
1974	525.1	510.7	559.8	632.5	839.4	2561.1	1681.9	595.4	484.8	520.0	581.4	461.9	9950.0
1975	545.2	481.3	690.5	605.1	1330.2	2114.2	2024.6	813.0	438.5	0.0	1.8	.6	9648.9
AVERAGE	391.8	418.4	556.6	486.7	890.0	1626.3	1121.1	426.7	397.1	476.3	445.8	375.3	7807.8
MEDIAN	391.1	387.7	533.0	472.0	922.5	1746.2	1013.6	422.5	404.0	468.7	435.1	387.0	8084.4
80 PERCENTILE	280.6	303.2	377.9	340.3	626.6	1250.9	580.2	250.1	256.2	375.8	383.0	317.4	5828.0
60 PERCENTILE	535.9	354.8	467.1	407.1	793.1	1542.1	851.4	354.9	348.3	440.3	423.9	375.7	7515.7
40 PERCENTILE	406.4	433.9	554.8	514.7	983.4	1991.3	1190.0	446.8	435.5	508.0	467.8	406.1	8286.2
20 PERCENTILE	484.2	485.0	661.3	557.7	1063.2	2359.3	1502.6	588.2	492.2	592.7	514.7	440.8	9363.4
MAXIMUM	616.8	950.0	1100.3	860.9	1592.4	2714.8	2406.1	799.6	673.1	723.2	671.8	514.5	11221.6
MINIMUM	172.4	238.0	253.3	136.7	334.3	1004.9	147.2	49.9	144.8	321.5	295.9	268.1	4348.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMEND DEVELOPMENT LEVEL
WITHOUT SRD AND STORAGE PROJECTS
PLAINS RIVER AT ARVADA

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1934	8.4	4.0	24.1	10.4	15.4	14.6	0.0	0.0	0.0	5.0	5.3	7.2	99.5
1935	4.3	5.7	17.6	19.4	7.6	14.8	0.0	0.0	0.0	25.6	4.8	6.0	109.0
1941	5.4	6.6	10.8	64.5	73.4	18.3	39.7	44.1	9.2	17.0	14.1	11.8	315.4
1942	5.3	6.7	15.7	29.9	38.8	9.8	0.0	0.0	0.0	6.5	8.3	5.8	127.0
1943	7.2	8.9	36.3	41.4	32.0	49.7	.7	0.0	0.0	3.3	5.9	4.5	191.8
1944	5.1	3.3	8.3	33.2	91.2	96.0	13.6	0.0	0.0	6.6	7.9	7.1	260.6
1945	6.3	6.4	31.2	35.2	29.7	56.5	14.4	2.3	2.3	9.6	11.2	6.3	216.6
1946	9.6	12.0	16.2	23.3	21.2	28.0	11.6	0.0	5.0	9.0	10.2	7.8	155.9
1947	6.0	9.7	57.1	15.6	78.4	38.0	10.1	0.0	0.0	5.4	9.3	6.8	239.3
1948	5.3	12.3	51.6	15.7	24.7	69.9	13.6	0.0	0.0	6.1	6.3	5.4	215.4
1949	4.1	3.3	52.9	16.3	26.0	31.6	0.0	0.0	0.0	5.7	6.0	1.6	150.2
1950	2.6	5.0	12.4	21.4	45.1	11.6	0.0	0.0	0.0	6.3	7.2	2.6	112.8
1951	4.4	4.4	15.3	6.7	11.0	0.0	0.0	0.0	13.5	7.3	6.9	4.8	74.3
1952	2.6	5.8	14.0	21.2	66.0	7.6	.4	0.0	0.0	1.7	4.5	3.1	126.4
1953	5.3	6.2	17.2	9.3	2.2	29.6	0.0	4.8	0.0	.4	3.5	3.6	82.0
1954	5.9	11.5	15.1	15.0	8.3	0.0	0.0	0.0	0.0	.6	4.1	2.3	58.9
1955	2.7	5.2	43.1	29.7	25.1	35.1	0.0	5.0	0.0	1.7	3.0	12.7	158.2
1956	8.3	8.8	35.4	14.2	14.3	8.3	0.0	0.0	0.0	.4	2.8	4.6	94.1
1957	4.0	1.9	16.9	15.0	22.5	56.1	4.4	0.0	0.0	6.2	8.5	7.0	138.5
1958	5.7	4.8	11.7	15.2	22.9	15.2	18.1	0.0	0.0	1.4	5.5	4.3	104.5
1959	4.2	3.5	21.0	10.0	22.9	17.4	2.0	0.0	0.0	2.4	2.9	4.4	90.5
1960	3.3	3.0	35.2	15.7	.4	0.0	0.0	0.0	0.0	.4	2.3	2.0	63.7
1961	2.7	2.9	7.9	5.0	8.3	0.0	0.0	0.0	0.0	9.8	6.5	2.6	46.1
1962	2.4	25.5	14.7	24.1	118.3	190.9	39.3	0.0	0.9	23.6	10.8	9.0	471.4
1963	7.7	14.7	13.3	13.6	26.2	47.9	1.0	0.0	6.2	4.2	7.1	5.1	149.0
1964	5.9	4.3	12.3	27.2	33.2	97.1	10.3	0.0	0.0	2.8	7.0	6.2	206.2
1965	4.2	13.3	28.9	40.3	41.8	59.3	19.0	.9	.8	8.8	8.3	5.4	235.4
1966	4.9	3.3	20.3	15.9	12.2	1.1	0.0	0.0	2.5	3.1	6.6	4.0	76.3
1967	5.0	8.9	12.3	10.5	25.0	153.1	38.2	0.0	2.9	8.6	9.6	5.0	278.8
1968	5.0	7.5	21.3	13.5	39.2	121.8	11.2	3.6	6.8	10.6	9.1	7.3	256.8
1969	9.1	7.0	18.7	13.9	12.9	10.1	.7	0.0	0.0	3.4	7.0	4.8	86.5
1970	6.1	9.1	15.3	12.5	62.2	44.5	2.6	0.0	0.0	5.3	8.3	6.8	173.6
1971	4.3	8.8	36.3	15.6	48.3	49.3	0.0	0.0	0.0	7.2	9.5	6.5	187.5
1972	5.6	32.4	38.0	20.6	43.3	32.4	0.0	3.3	1.4	9.8	9.3	5.0	201.6
1973	5.9	7.3	20.0	39.4	74.1	22.3	16.3	0.0	14.9	13.7	18.6	18.2	250.9
1974	15.3	11.9	16.4	39.5	17.1	3.1	0.0	0.0	0.0	6.1	8.8	6.2	124.9
1975	5.2	5.1	15.0	21.1	36.3	96.9	20.1	0.0	0.0	.4	.6	.4	202.3
AVERAGE	5.3	6.1	23.2	21.6	34.3	41.5	7.6	1.8	2.0	6.7	7.3	5.8	169.7
MEDIAN	5.3	5.7	17.8	15.6	25.0	26.0	.7	0.0	0.0	6.1	7.1	5.4	189.0
80 PERCENTILE	3.3	3.3	12.3	12.5	12.2	7.6	0.0	0.0	0.0	1.7	4.5	3.6	88.5
60 PERCENTILE	4.3	5.3	15.7	14.9	22.4	15.2	0.0	0.0	0.0	5.0	6.6	4.8	124.9
40 PERCENTILE	5.7	7.3	20.5	20.3	32.0	35.1	2.6	0.0	0.0	6.6	8.3	6.2	173.6
20 PERCENTILE	8.3	11.3	36.3	29.9	48.3	56.1	13.8	.9	2.9	9.6	9.3	7.1	235.4
MAXIMUM	15.3	32.4	57.1	64.6	118.3	190.9	39.7	44.1	14.9	25.6	18.6	18.2	471.4
MINIMUM	2.2	1.9	7.9	5.0	.9	0.0	0.0	0.0	0.0	.4	2.3	1.6	46.1

STUDY NO. 1

YELLOWSTONE LEVEL 3 OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL
WITHOUT SRD AND STORAGE PROJECTS
POWDER RIVER AT LOCATE

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	5.1	.4	121.5	14.6	15.0	34.3	0.0	0.0	0.0	0.0	.1	1.7	200.7
1940	6.8	0.0	23.4	20.9	.9	20.4	9.3	0.0	0.0	51.8	4.2	9.0	134.9
1941	4.2	5.7	17.5	53.4	150.4	59.6	15.6	45.7	39.5	34.5	18.0	21.8	463.7
1942	6.5	7.2	56.3	40.1	61.7	57.8	0.0	0.0	0.0	4.8	4.5	6.1	240.9
1943	7.9	204.5	145.1	64.9	36.5	130.4	14.7	0.0	0.0	0.0	4.9	2.5	621.5
1944	.3	0.0	227.5	124.5	165.0	453.6	65.6	0.0	0.0	1.7	6.5	4.5	1049.2
1945	2.5	11.6	55.5	34.3	27.5	131.1	29.8	5.0	2.5	10.9	10.1	5.9	325.7
1946	12.7	10.9	55.5	35.6	50.4	81.9	33.5	0.0	11.9	37.6	15.5	16.4	371.0
1947	11.9	33.9	194.1	62.9	117.0	84.6	26.7	0.0	0.0	2.7	6.1	6.2	545.6
1948	2.7	93.5	202.4	30.1	40.7	110.5	51.6	.6	0.0	7.9	12.6	1.5	558.8
1949	.7	0.0	224.4	40.5	42.1	55.8	0.0	0.0	0.0	4.1	9.5	0.0	385.1
1950	0.0	0.0	0.0	64.5	64.4	37.4	0.0	0.0	0.0	6.1	3.6	4.1	179.9
1951	1.4	2.5	21.5	17.8	5.1	0.0	0.0	5.2	23.6	11.8	15.7	19.7	121.9
1952	1.5	5.1	99.1	105.4	74.4	28.5	0.0	0.0	0.0	0.0	2.3	2.3	319.4
1953	3.3	7.1	27.5	11.6	6.4	92.9	0.0	5.4	0.0	0.0	.6	5.9	159.0
1954	3.6	15.5	20.5	5.5	6.5	0.0	0.0	0.0	1.8	0.0	0.0	1.4	56.0
1955	.5	0.0	23.6	81.0	30.6	45.9	5.4	0.0	0.0	0.0	0.0	.8	188.6
1956	3.5	1.1	69.2	22.5	24.2	24.8	0.0	0.0	0.0	0.0	.2	3.2	148.9
1957	1.5	.4	15.9	15.1	5.5	113.1	10.4	0.0	0.0	2.9	7.6	3.8	180.2
1958	5.9	6.4	15.5	17.1	27.6	55.9	29.4	0.0	0.0	0.0	1.3	4.9	141.9
1959	2.4	2.9	157.3	21.3	15.5	16.8	0.0	0.0	0.0	0.0	2.8	6.3	227.7
1960	2.8	4.3	121.2	21.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	150.1
1961	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.5	0.0	15.2
1962	0.0	72.8	47.1	54.6	117.5	248.3	96.0	3.0	0.0	23.7	12.6	5.9	659.4
1963	5.9	59.5	39.4	20.1	44.1	175.2	25.4	0.0	.5	2.7	7.6	1.8	377.9
1964	3.6	5.0	23.9	27.3	25.2	172.2	42.0	0.0	0.0	0.0	.9	1.8	299.8
1965	5.6	11.4	10.4	175.4	48.7	91.7	20.7	0.0	0.0	11.3	9.4	5.8	389.3
1966	4.5	5.5	25.4	19.4	4.3	0.0	0.0	0.0	0.0	0.0	1.1	1.6	60.2
1967	2.1	6.7	27.4	17.0	55.5	274.6	81.2	0.0	10.7	10.6	12.4	3.0	504.1
1968	2.7	22.0	115.8	25.6	34.7	201.4	18.4	17.6	17.3	12.9	14.9	4.2	487.5
1969	7.5	5.5	131.4	68.7	44.6	12.1	23.7	0.0	0.0	0.0	7.5	1.9	302.8
1970	5.4	10.5	50.3	27.4	94.5	114.6	1.0	0.0	0.0	1.3	9.4	5.2	315.5
1971	1.5	100.9	172.6	64.6	55.9	148.6	0.0	0.0	0.0	49.2	18.2	2.2	612.1
1972	4.1	74.6	279.2	47.1	45.5	74.1	6.6	.2	5.7	15.5	17.8	2.8	565.1
1973	7.5	9.9	32.7	58.9	102.4	93.2	3.1	0.0	26.2	16.1	14.9	4.5	339.5
1974	24.4	25.6	40.8	49.9	45.5	25.5	0.0	0.0	0.0	11.1	15.2	8.5	245.4
1975	7.2	9.5	58.8	45.9	106.5	154.6	72.7	0.0	0.0	0.0	0.0	0.0	450.8
AVERAGE	4.2	23.2	80.2	42.5	46.5	91.7	18.5	2.1	3.6	9.0	7.3	4.6	535.1
MEDIAN	2.5	6.7	47.1	30.1	40.7	65.8	3.4	0.0	0.0	2.7	6.5	3.2	302.6
80 PERCENTILE	.7	.4	20.5	17.8	6.3	16.8	0.0	0.0	0.0	0.0	.9	1.6	148.9
60 PERCENTILE	2.5	4.8	28.5	32.6	27.8	38.3	0.0	0.0	0.0	1.3	4.2	2.5	227.7
40 PERCENTILE	4.5	9.8	55.5	57.1	44.5	84.8	14.7	0.0	0.0	6.1	9.4	4.1	339.5
20 PERCENTILE	5.9	23.6	144.1	64.5	64.4	131.1	29.4	.2	2.3	12.9	14.9	6.1	504.1
MAXIMUM	24.4	204.5	279.2	175.4	165.0	453.6	96.0	45.7	39.5	51.8	18.2	21.8	1049.2
MINIMUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.2

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD AND STORAGE PROJECTS
YELLOWSTONE RIVER AT SIDNEY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1934	377.0	268.9	728.0	401.0	789.5	1157.5	408.7	139.4	95.7	322.7	344.6	304.6	5337.8
1940	165.5	262.5	298.9	321.9	591.0	1291.5	169.9	0.0	75.9	532.7	290.6	296.8	4295.6
1941	213.5	240.5	560.7	583.7	664.4	1140.6	332.5	500.2	765.2	801.8	547.6	470.0	6246.5
1942	458.0	489.7	681.9	539.8	943.4	1834.6	933.9	511.0	265.7	470.4	488.9	334.5	7956.9
1943	402.5	800.5	1220.3	1053.0	950.5	2014.6	2515.2	648.7	814.4	445.5	480.2	420.5	11411.9
1944	411.4	395.4	1029.5	760.0	870.5	3131.1	1571.7	371.2	530.3	455.5	448.7	317.4	10098.6
1945	414.5	599.5	753.5	540.5	501.5	1692.5	1658.0	496.7	595.2	576.0	508.8	350.2	8141.8
1946	505.4	419.5	684.0	449.2	644.2	1926.6	667.2	188.0	398.9	606.7	513.3	410.9	6913.7
1947	363.9	417.5	1172.9	756.8	1339.1	1699.5	1445.7	455.1	567.5	583.1	544.3	461.4	9606.5
1948	456.4	449.2	779.5	574.0	883.9	2644.1	1165.6	349.7	186.7	425.1	459.1	256.4	8629.8
1949	296.5	328.7	640.7	581.4	826.9	1485.0	561.6	174.9	246.1	425.1	433.5	280.4	6331.2
1950	296.5	395.5	701.9	860.9	971.1	1709.2	1317.7	556.1	414.8	604.2	495.0	483.6	8404.9
1951	469.0	465.2	650.9	649.0	711.4	1342.5	1517.3	709.4	536.6	586.4	573.9	346.8	8559.4
1952	462.9	589.5	749.4	1556.8	1505.1	1797.3	734.0	361.8	266.6	372.4	373.7	326.6	8656.0
1953	395.5	371.1	438.9	303.9	416.7	1946.6	760.6	270.3	175.4	345.0	386.9	374.3	6085.1
1954	193.7	414.9	555.1	462.2	836.4	953.5	927.9	317.7	220.4	374.9	423.7	373.8	5837.4
1955	225.3	271.5	299.1	667.4	642.1	1271.0	606.0	110.9	100.6	367.6	352.3	360.5	5274.5
1956	537.1	690.6	713.6	569.9	1024.8	2141.7	663.3	295.7	264.5	354.1	439.0	342.2	7436.8
1957	544.6	541.7	564.5	567.6	1020.4	2716.9	1373.5	335.9	393.0	476.7	491.5	414.7	9041.2
1958	404.6	386.5	552.9	586.7	809.6	1547.9	568.7	140.3	165.3	361.6	372.7	298.9	5754.6
1959	524.5	520.0	1194.0	424.4	512.1	1738.1	849.1	170.4	205.6	460.4	384.2	434.4	7028.3
1960	236.1	320.5	788.5	419.5	382.8	1052.2	88.3	52.8	112.4	302.6	304.1	246.2	4371.7
1961	262.7	278.4	515.0	134.1	185.5	1107.7	41.8	0.0	325.1	537.5	501.9	513.1	4023.9
1962	513.6	529.4	573.5	582.5	1036.6	2302.6	1442.1	446.9	393.9	531.7	465.4	413.4	9035.5
1963	380.1	861.8	635.9	424.2	1093.5	2562.7	845.0	219.4	357.6	398.6	439.9	319.2	8538.9
1964	425.4	444.2	431.0	491.8	894.1	2306.1	1494.7	412.8	591.7	406.0	430.4	334.9	8668.8
1965	439.9	486.8	583.2	1257.6	1102.2	2649.1	2416.3	705.3	582.7	687.8	445.2	437.3	11655.5
1966	420.1	416.3	884.5	558.1	564.4	925.6	282.6	79.8	134.9	351.0	396.9	419.4	5034.5
1967	532.5	534.2	417.4	484.1	816.4	2582.6	2543.7	532.2	410.0	566.6	536.0	479.4	10037.2
1968	665.4	526.7	901.6	460.6	567.4	2444.1	1297.4	605.7	658.3	642.3	549.7	479.7	9946.8
1969	544.4	503.4	1117.5	691.5	980.1	1247.9	1225.0	540.1	275.1	458.4	452.4	472.9	8351.7
1970	501.9	544.2	555.1	586.5	1175.4	2429.0	1579.9	372.3	370.4	510.6	496.6	493.6	9212.5
1971	589.5	1035.6	1179.7	931.5	1174.7	2523.2	1554.0	530.2	530.4	869.5	622.3	457.6	12077.9
1972	504.7	528.6	1616.1	677.7	979.0	2106.6	947.2	483.3	489.7	669.1	659.8	428.5	10199.3
1973	567.0	562.1	660.5	593.6	1191.5	1692.8	662.4	548.1	554.0	640.3	655.1	521.6	8648.9
1974	535.1	537.5	595.2	677.6	811.5	2494.8	1690.5	515.6	450.2	559.9	614.9	499.5	9979.7
1975	556.7	437.4	611.6	715.6	1509.0	2261.8	2766.3	766.6	445.5	1.2	6.4	4.5	10283.1
AVERAGE	401.4	450.5	721.9	587.4	847.1	1836.8	1115.7	354.7	343.1	485.8	480.5	377.9	8035.5
MEDIAN	402.5	416.0	644.0	559.6	826.9	1738.1	935.9	340.1	357.6	470.4	459.1	374.5	8351.7
80 PERCENTILE	493.5	520.0	434.0	585.3	567.4	1271.0	561.6	140.3	175.4	367.6	384.2	313.1	5754.6
60 PERCENTILE	503.5	543.0	596.6	660.6	789.5	1692.5	760.6	300.2	280.6	445.5	439.9	346.8	7436.8
40 PERCENTILE	420.1	544.2	715.6	581.0	894.1	2106.6	1297.4	371.2	393.9	536.7	491.3	419.4	8648.9
20 PERCENTILE	501.9	544.2	901.6	691.5	1038.6	2562.7	1534.0	515.6	450.2	604.2	544.3	470.0	9948.8
MAXIMUM	665.4	1035.6	1616.1	1556.8	1534.1	3131.1	2543.7	709.4	765.2	869.5	659.8	521.6	12077.9
MINIMUM	165.5	240.5	298.9	134.1	185.5	925.6	41.8	0.0	75.9	302.6	290.8	246.2	4023.9

2000

Recommended Development Level

without SRD and Hardin Project

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL

78/03/16.

WITHOUT SRD AND HARDIN PROJECT
YELLOWSTONE ABOVE LIVINGSTON

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	82.3	87.9	87.8	150.9	537.4	497.5	312.6	158.2	104.9	102.9	78.9	66.6	2246.2
1940	56.7	55.2	71.2	94.1	455.3	576.2	244.1	115.9	84.9	95.7	78.3	72.5	2004.6
1941	60.9	51.9	63.2	73.3	328.0	428.2	231.0	152.0	160.5	171.7	131.4	110.3	1984.1
1942	87.2	76.0	80.8	157.6	415.6	693.7	464.2	183.5	115.2	99.9	68.9	79.1	2450.6
1943	69.9	62.1	83.6	197.8	920.8	1101.9	813.1	511.2	271.1	120.7	102.5	85.9	3560.1
1944	74.5	63.9	71.9	74.3	295.0	591.8	380.2	170.9	120.2	114.5	94.5	73.9	2133.7
1945	65.9	52.9	63.7	72.2	256.5	664.9	581.6	265.5	169.3	147.9	118.5	93.1	2552.9
1946	94.3	74.1	84.3	200.6	396.3	635.9	324.7	162.7	115.6	114.5	97.7	84.8	2384.1
1947	86.9	62.6	77.6	96.7	534.8	795.2	544.9	267.2	172.5	150.3	116.3	98.1	2985.3
1948	93.9	77.6	80.2	99.5	541.7	1021.9	425.4	220.7	129.2	111.3	93.7	73.3	2958.0
1949	59.3	54.9	64.3	144.9	576.2	739.5	580.5	194.2	127.9	125.2	100.3	73.9	2656.8
1950	55.3	54.8	57.3	93.9	260.5	677.5	694.6	282.9	176.7	164.9	136.9	115.8	2969.7
1951	85.2	73.8	83.4	123.3	515.9	708.9	576.9	326.1	182.9	149.6	114.3	87.3	3027.5
1952	73.9	64.9	79.6	171.9	626.5	835.6	400.9	213.3	125.1	101.2	79.9	72.9	2845.6
1953	73.3	65.2	79.2	85.1	196.7	753.5	455.1	189.7	117.3	101.1	88.7	73.4	2247.4
1954	61.9	54.9	60.5	92.6	494.5	690.9	553.9	229.4	137.5	104.3	89.4	75.6	2636.6
1955	68.3	57.2	71.7	79.9	235.2	807.6	552.9	189.5	115.6	108.3	93.9	85.9	2065.9
1956	85.3	74.7	86.1	130.2	584.6	1096.9	505.6	220.7	129.2	114.7	95.8	80.4	3186.1
1957	66.7	62.1	79.3	79.9	413.2	895.9	490.9	217.8	136.4	110.1	96.9	82.8	2739.6
1958	88.9	81.9	79.2	90.1	471.9	545.5	289.8	146.9	97.6	82.1	84.3	80.6	2043.8
1959	65.8	88.7	92.4	85.1	242.2	953.9	468.5	194.2	124.5	129.8	101.9	91.1	2558.1
1960	90.9	71.7	91.9	114.4	263.5	629.2	244.4	142.6	95.4	94.4	87.7	75.7	1490.9
1961	65.7	60.9	69.8	70.2	259.3	617.1	217.8	120.6	117.0	140.5	120.0	93.9	1952.3
1962	88.9	96.5	91.8	175.7	507.1	906.1	537.9	252.9	144.8	124.2	108.5	96.9	3115.1
1963	96.1	80.9	78.2	93.1	419.9	857.0	412.9	187.9	132.9	114.4	99.9	83.4	2611.7
1964	85.3	55.9	56.9	94.7	362.3	875.6	629.4	253.9	148.7	117.4	102.2	90.9	2842.4
1965	96.3	74.1	81.7	116.9	359.9	1160.1	785.9	325.5	199.9	174.8	129.6	101.8	3592.4
1966	82.9	66.6	81.5	103.6	418.2	930.9	681.5	147.9	110.6	103.6	87.8	77.9	2093.5
1967	75.9	72.9	82.6	94.6	359.7	1122.1	778.5	274.2	151.7	141.7	114.1	93.1	3359.2
1968	90.4	82.5	93.1	96.2	274.5	1034.1	906.9	317.9	220.7	183.1	136.9	106.6	3238.9
1969	90.1	92.9	98.5	163.9	673.9	705.1	488.3	213.7	147.5	123.2	104.1	90.9	2969.8
1970	90.5	75.9	83.3	81.5	409.4	1084.9	599.9	241.1	173.9	147.1	117.7	102.1	3200.5
1971	90.9	91.9	97.1	110.1	484.9	1213.9	805.2	314.5	191.6	162.3	129.5	99.2	3787.2
1972	88.2	81.8	104.9	117.1	424.9	1155.3	559.4	260.9	149.3	191.8	140.7	110.9	3461.7
1973	100.9	89.5	90.8	89.9	353.9	666.6	387.1	183.9	133.2	120.5	112.9	93.1	2382.9
1974	75.3	66.5	82.3	133.1	379.8	1358.1	736.6	292.3	159.2	137.3	104.5	87.9	3592.2
1975	94.1	85.9	84.3	84.2	203.9	814.3	414.9	306.7	178.9	.2	.8	.6	2726.4
AVERAGE	79.1	68.9	79.5	110.8	401.3	892.6	497.5	222.9	145.3	124.8	102.9	85.9	2733.8
MEDIAN	74.3	68.5	80.2	96.2	404.5	739.5	488.3	213.7	132.9	123.2	101.9	85.9	2656.8
90 PERCENTILE	85.9	74.4	84.3	90.1	263.4	607.9	312.8	158.2	115.6	102.4	88.7	73.9	2093.5
50 PERCENTILE	88.3	82.5	79.8	86.9	362.3	896.7	412.9	189.7	127.9	114.5	96.9	82.8	2552.9
10 PERCENTILE	90.9	76.9	86.9	110.1	424.9	975.6	537.9	229.4	144.8	126.7	104.5	90.9	2958.0
25 PERCENTILE	85.9	77.8	84.5	144.9	513.4	1044.0	666.0	274.2	172.5	149.5	114.5	98.1	3200.5
HIGHEST	100.9	92.9	104.9	200.6	673.9	1358.1	813.1	326.1	220.7	191.8	140.7	115.8	3787.2
LOWEST	56.7	54.9	56.9	73.3	194.7	625.6	217.8	115.9	84.9	84.1	78.9	66.6	1952.3

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL

78/03/16.

WITHOUT SRD AND HARDIN PROJECT
STILLWATER AT ABSAROKER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	13.5	11.7	17.0	20.8	96.7	91.5	60.5	26.0	15.7	19.0	15.0	12.1	403.7
1940	15.2	12.2	11.1	19.1	101.4	204.3	71.0	29.2	24.5	27.4	19.9	16.1	583.1
1941	18.7	11.5	13.2	19.5	96.1	159.2	84.7	52.5	48.7	52.6	30.3	25.2	630.9
1942	25.5	15.2	15.7	30.7	102.0	208.8	201.6	50.5	30.2	32.5	25.9	22.6	760.5
1943	14.6	13.5	25.6	70.5	109.3	254.6	271.3	81.4	52.2	35.3	25.6	20.9	1023.1
1944	15.5	13.1	15.9	14.5	103.0	280.5	220.2	60.8	45.1	33.2	25.6	20.9	849.5
1945	18.3	15.1	15.2	25.3	80.6	211.6	225.2	73.4	43.0	30.6	25.4	19.9	764.7
1946	14.0	13.4	14.5	24.5	80.4	172.8	115.5	39.6	32.7	31.6	24.0	20.5	580.7
1947	14.8	14.2	25.1	34.8	125.5	183.5	192.5	62.5	44.5	43.0	27.5	21.7	790.4
1948	17.3	17.7	21.2	28.5	114.5	274.2	151.6	65.2	28.4	25.8	22.0	14.8	767.4
1949	13.2	13.4	13.1	27.4	115.3	171.8	96.6	37.7	35.0	29.5	26.0	16.5	589.9
1950	11.2	15.8	15.3	20.1	51.7	207.5	187.6	62.4	45.4	36.3	30.0	23.3	708.5
1951	20.3	16.9	14.4	23.4	93.6	137.7	178.9	88.4	38.6	34.6	25.4	19.0	699.1
1952	16.2	14.3	17.5	40.4	138.0	225.0	135.0	71.6	35.1	24.4	22.3	19.4	759.6
1953	17.3	15.1	13.3	14.7	85.4	180.0	136.0	55.5	28.6	21.3	20.7	16.2	574.4
1954	15.4	13.7	18.1	20.0	97.5	173.4	156.6	44.3	23.7	26.1	22.7	16.0	579.8
1955	12.9	12.0	12.7	21.6	87.1	148.8	97.1	36.3	21.7	23.0	18.5	19.0	470.8
1956	17.5	14.3	22.1	26.2	140.4	232.9	108.6	53.1	28.0	23.4	22.2	22.9	710.2
1957	15.4	12.6	14.3	17.4	134.5	342.2	226.9	58.0	40.9	32.9	26.9	24.1	952.7
1958	14.4	13.3	13.3	14.3	148.3	171.1	85.6	51.2	32.5	25.5	24.3	22.7	631.8
1959	15.5	13.1	19.4	24.2	58.5	266.6	128.4	43.6	26.3	31.9	28.1	21.4	680.6
1960	16.2	13.1	13.5	15.3	39.4	148.5	58.4	32.6	18.4	21.3	19.9	17.8	412.4
1961	15.1	14.3	12.6	8.6	55.4	145.9	45.8	27.6	44.4	41.5	32.5	26.6	474.3
1962	20.7	22.4	19.1	33.3	74.8	238.1	152.4	71.1	45.6	37.6	25.0	21.0	759.2
1963	16.4	14.9	15.0	20.3	94.4	265.8	119.2	43.5	41.0	29.5	23.9	17.9	714.1
1964	16.4	15.0	14.3	17.4	64.4	202.4	175.2	42.3	23.3	20.7	23.4	22.9	643.2
1965	20.4	16.5	16.4	25.0	58.3	244.9	204.9	77.9	48.4	39.0	25.6	21.3	800.2
1966	19.3	16.5	18.2	27.4	104.5	137.6	88.4	45.0	29.4	31.4	22.5	19.0	558.5
1967	19.4	15.2	21.0	15.7	73.0	325.0	272.0	66.4	41.1	47.6	29.5	19.3	982.3
1968	19.3	19.2	27.4	21.0	53.7	250.2	166.7	87.0	53.4	34.7	25.6	21.1	780.3
1969	19.4	16.3	18.4	25.3	96.4	172.3	159.9	50.5	25.8	26.6	23.9	18.4	656.2
1970	14.3	14.5	13.4	18.5	120.2	352.7	159.3	50.2	32.4	35.6	28.2	22.7	859.4
1971	22.4	21.6	17.9	27.6	48.5	281.4	187.2	70.0	63.7	44.9	31.8	25.0	887.7
1972	18.4	25.4	34.0	24.4	84.3	238.3	127.2	88.4	61.6	45.7	29.3	22.4	801.6
1973	17.6	16.4	18.2	39.1	112.9	207.3	130.7	47.4	34.1	35.2	24.9	21.2	725.0
1974	20.1	16.0	20.0	28.8	53.4	342.5	225.7	74.3	42.6	33.2	26.4	17.6	911.2
1975	16.1	11.6	15.4	30.2	118.0	271.4	405.7	86.5	35.3	0.0	0.0	0.0	999.3
AVERAGE	17.3	15.6	16.1	25.3	90.4	219.0	156.6	58.5	38.3	31.6	24.2	19.8	713.7
MEDIAN	16.4	15.2	17.5	23.0	95.5	207.5	136.6	52.5	38.6	31.9	25.0	20.9	710.2
60 PERCENTILE	14.3	12.2	13.3	19.3	56.4	166.9	84.7	39.6	25.8	24.9	22.0	17.9	574.4
50 PERCENTILE	17.5	13.0	15.3	20.1	74.4	183.5	128.4	50.2	32.5	29.5	23.9	19.3	656.2
40 PERCENTILE	15.9	13.7	16.2	25.5	94.4	252.4	159.9	60.8	42.8	33.2	25.6	21.2	759.6
20 PERCENTILE	19.4	16.4	20.0	28.8	113.5	274.2	201.0	71.6	48.4	39.0	28.1	22.9	841.8
MAXIMUM	25.5	25.4	34.0	70.5	148.4	342.5	272.0	88.4	68.7	52.6	32.5	26.6	1023.1
MINIMUM	11.2	10.1	11.1	8.6	34.8	91.5	45.4	25.2	15.7	16.0	15.0	12.1	403.7

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STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 PROJECTED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
CLARKS FORK OF YELLOWSTONE AT EDGAR

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	28.1	16.4	26.7	55.8	160.1	161.1	76.8	11.9	9.3	22.3	21.8	18.6	588.7
1940	14.3	17.7	20.2	20.0	142.1	194.5	31.0	0.0	13.2	34.8	27.0	26.8	537.2
1941	21.1	17.5	17.1	22.0	117.0	186.9	48.1	30.2	77.2	62.1	39.1	30.8	648.9
1942	24.3	18.6	25.7	41.8	95.9	191.1	126.8	15.5	17.8	30.7	33.2	31.1	649.8
1943	25.9	22.3	34.6	82.7	124.5	322.8	278.8	69.9	39.7	32.8	33.8	27.8	1092.7
1944	22.3	20.3	20.8	19.8	100.5	255.0	132.8	19.3	29.3	30.8	28.5	24.2	682.9
1945	25.9	19.2	23.2	20.8	71.8	259.6	211.8	55.8	29.8	35.8	34.2	27.8	792.1
1946	25.7	21.3	23.2	53.2	92.3	209.1	96.3	18.1	21.0	33.1	30.9	27.5	659.2
1947	20.7	20.6	33.3	28.2	143.7	196.8	137.7	35.1	19.5	35.3	33.1	28.8	752.0
1948	24.3	27.8	25.2	25.7	154.1	293.1	73.3	21.7	14.5	22.8	25.8	21.8	729.2
1949	17.7	17.0	26.2	36.0	158.6	234.9	79.8	10.0	21.8	33.6	30.5	30.8	698.5
1950	23.8	21.8	23.6	27.5	67.6	266.8	222.6	53.3	41.3	55.1	44.8	37.5	885.5
1951	24.8	24.0	31.2	33.5	160.2	194.1	212.3	84.3	37.3	45.6	38.1	26.9	927.1
1952	26.7	25.1	25.6	49.6	146.3	252.5	85.5	40.8	18.0	25.0	26.8	24.7	735.1
1953	24.1	19.9	21.0	24.7	89.2	243.8	125.7	30.0	14.8	18.7	28.7	28.6	634.2
1954	25.3	23.4	22.9	23.8	163.8	179.6	165.4	24.5	17.3	24.2	26.0	27.5	728.5
1955	26.3	23.1	25.5	27.1	84.3	193.2	78.5	13.0	8.3	18.4	27.5	29.4	532.6
1956	22.1	22.5	32.2	58.1	179.5	344.1	112.8	36.9	21.9	21.7	33.0	26.7	891.6
1957	21.7	27.5	25.8	24.1	140.9	346.1	161.0	29.3	33.2	36.7	37.0	31.3	924.6
1958	26.9	21.3	21.6	23.5	187.0	194.9	41.4	22.9	19.5	20.5	30.7	31.2	646.4
1959	24.5	21.7	23.0	29.7	52.5	340.5	136.5	27.7	19.1	41.4	36.3	28.7	789.6
1960	20.1	19.3	28.9	29.6	58.5	216.5	27.4	14.0	5.7	20.7	27.6	24.7	493.0
1961	23.1	19.4	19.0	6.6	83.6	238.4	26.4	3.0	50.8	49.9	35.8	27.1	583.1
1962	20.2	22.7	22.5	52.4	105.0	287.1	117.0	45.5	31.0	33.3	30.8	30.5	798.0
1963	21.4	35.0	25.0	25.0	137.4	285.2	87.9	9.2	31.9	24.7	29.3	24.6	732.6
1964	19.2	18.4	19.9	24.2	113.5	250.3	179.3	19.6	15.0	21.8	31.9	29.1	757.2
1965	27.9	23.9	20.1	34.8	91.9	334.2	199.6	66.6	44.0	45.3	34.9	31.0	959.0
1966	24.5	19.2	23.5	24.1	111.4	167.3	57.6	14.8	20.3	28.4	29.7	27.2	548.1
1967	25.7	21.6	22.1	20.4	109.3	376.5	232.0	41.1	23.9	42.4	37.0	28.9	981.9
1968	26.4	24.3	26.2	21.2	45.6	279.4	120.4	73.0	42.0	37.7	31.9	26.2	752.3
1969	24.7	22.2	22.5	39.7	137.1	193.2	91.1	11.8	12.1	30.1	30.9	28.0	643.4
1970	24.3	22.7	22.0	20.2	136.0	306.1	115.9	17.2	34.5	37.9	31.6	28.3	796.7
1971	24.3	25.3	25.3	25.8	125.1	359.4	178.4	54.6	52.2	51.0	38.3	31.2	993.9
1972	24.3	26.8	37.2	27.6	111.0	378.3	134.4	67.7	51.3	58.2	41.0	29.6	994.6
1973	26.4	25.9	24.3	32.9	100.2	187.0	84.0	21.1	47.5	36.3	37.3	25.5	650.9
1974	30.3	22.3	25.2	58.4	97.1	393.8	180.2	53.9	31.9	29.9	34.3	27.9	965.7
1975	18.5	14.8	32.2	30.0	98.6	253.5	334.5	61.2	26.8	.0	1.0	.8	876.9
AVERAGE	24.1	22.3	25.1	31.4	113.2	256.9	129.7	33.0	26.2	33.1	31.6	27.4	758.1
MEDIAN	24.3	21.8	25.7	28.2	111.4	258.4	117.0	24.5	21.9	33.1	31.9	28.0	732.6
50 PERCENTILE	21.1	19.2	21.0	22.0	71.4	191.1	73.3	13.0	14.5	22.3	27.6	26.2	634.2
60 PERCENTILE	23.9	21.3	23.0	26.0	100.5	216.5	91.1	19.6	19.5	30.1	30.8	27.5	682.9
80 PERCENTILE	26.5	26.7	25.2	29.6	125.1	266.8	132.4	30.2	31.0	35.3	33.2	28.7	757.2
25 PERCENTILE	27.9	27.3	26.7	58.1	154.1	349.2	179.3	53.9	41.3	42.4	37.0	30.5	924.6
MAXIMUM	30.3	34.0	37.2	82.7	187.0	393.8	278.8	84.3	77.2	62.1	44.8	37.5	1092.7
MINIMUM	14.3	14.4	17.1	6.6	45.6	141.1	26.4	0.0	5.7	18.4	21.4	18.6	493.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMEND DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
YELLOWSTONE RIVER AT BILLINGS

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1938	156.5	104.7	214.1	254.6	646.0	941.5	429.3	151.7	113.9	170.8	159.6	134.2	3640.7
1940	96.9	105.4	137.5	184.5	794.2	1136.5	246.1	75.5	105.8	207.3	163.8	136.3	3284.6
1941	118.5	115.2	153.6	156.9	351.7	900.0	321.7	193.8	380.9	422.0	287.4	222.4	3800.9
1942	182.2	151.1	243.7	349.5	784.5	1451.9	643.5	236.9	191.9	232.2	230.9	208.0	5111.3
1943	182.2	223.9	331.2	521.5	784.8	2135.1	1585.4	463.9	300.8	249.4	231.1	195.3	7233.6
1944	164.8	140.7	179.2	146.2	511.5	1696.9	981.3	235.7	235.0	233.0	211.2	145.0	4880.4
1945	161.0	127.5	166.8	157.7	454.6	1474.6	1183.2	374.0	245.4	262.9	243.1	170.7	5021.5
1946	200.3	180.3	193.0	329.3	631.0	1225.6	576.5	180.1	200.5	271.6	217.5	182.1	4401.0
1947	165.2	126.2	193.5	272.8	1037.7	1479.7	960.2	358.6	259.3	299.9	243.4	207.0	5605.5
1948	165.6	154.9	200.3	252.8	1030.8	2131.9	714.7	292.4	185.0	208.7	192.7	136.6	5628.4
1949	121.5	135.5	162.9	288.9	940.1	1318.9	523.2	177.8	194.5	244.6	209.2	126.2	4461.3
1950	96.2	117.4	194.8	208.4	525.1	1629.1	1271.8	437.4	279.4	331.9	295.9	251.6	5630.6
1951	175.2	144.1	232.5	270.1	892.4	1220.8	1054.8	551.0	293.3	317.1	271.2	186.4	5663.1
1952	165.1	156.7	187.9	407.6	1229.5	1601.4	689.5	330.7	196.6	192.2	182.3	168.6	5510.1
1953	173.8	141.4	150.6	164.9	325.0	1454.5	790.6	280.2	165.0	175.4	193.4	175.3	4187.9
1954	125.3	150.9	140.3	197.5	841.9	1064.8	902.0	276.4	167.4	189.5	190.8	161.5	4411.4
1955	156.2	115.2	144.0	235.1	449.4	1183.0	569.9	205.9	136.1	187.1	173.0	174.4	3709.3
1956	162.5	146.1	251.2	308.6	1206.7	1902.8	696.8	299.2	196.7	190.3	214.0	179.1	5753.6
1957	102.5	144.7	187.7	186.1	959.1	2235.7	1036.5	285.8	260.6	263.5	238.8	195.7	6093.7
1958	154.4	135.5	159.6	179.3	952.0	1129.4	420.3	193.7	151.9	169.3	201.2	178.9	4025.7
1959	142.6	125.6	179.6	214.4	497.3	1940.5	649.1	239.8	180.8	269.4	234.4	195.6	5069.1
1960	120.1	139.9	179.2	208.2	396.7	1162.9	507.5	169.2	116.9	164.9	184.9	153.3	3303.7
1961	137.4	135.9	125.6	84.0	413.5	1106.1	249.0	96.8	261.5	309.0	276.1	197.6	3395.7
1962	147.2	222.3	213.3	357.8	801.2	1720.2	674.7	380.4	279.4	248.2	219.5	188.8	5655.2
1963	134.7	229.3	164.2	181.7	775.7	1782.0	644.8	206.5	223.7	200.3	203.7	155.7	4900.3
1964	147.4	154.1	150.2	200.9	699.0	1707.8	1113.6	318.4	206.2	189.6	207.8	188.4	5282.6
1965	211.3	186.2	174.5	304.6	680.7	2075.9	1428.7	540.5	387.0	356.0	258.4	202.4	6807.6
1966	142.9	172.4	204.3	235.4	805.6	958.9	436.3	184.5	179.7	213.2	219.3	194.5	3987.0
1967	191.8	165.1	197.5	184.8	673.7	2439.0	1569.4	575.0	226.2	300.5	255.1	198.4	6770.5
1968	156.3	225.5	228.3	219.1	465.9	2022.2	1102.4	541.6	412.3	341.1	278.2	203.5	6204.4
1969	190.5	181.0	225.8	361.6	984.5	1315.2	911.9	257.3	181.9	252.5	226.5	191.8	5253.5
1970	158.1	160.8	166.6	182.2	1005.6	2164.2	990.6	303.7	327.0	302.6	242.2	193.0	6198.6
1971	191.5	226.0	197.2	282.9	890.1	2206.2	1267.6	432.3	375.4	349.3	273.6	204.0	6898.1
1972	144.4	149.9	302.6	238.0	709.5	1947.6	842.1	452.1	377.6	391.1	288.7	203.6	6113.2
1973	194.2	172.5	206.0	289.6	849.3	1245.7	612.7	223.4	307.5	265.3	247.0	202.1	4812.5
1974	192.8	148.5	179.9	274.8	607.9	2427.4	1291.2	466.1	283.6	257.6	248.8	184.3	6562.9
1975	152.0	124.6	215.2	306.0	903.1	1944.8	2251.8	528.5	280.0	0.0	2.9	2.2	6711.2
AVERAGE	155.7	154.0	194.0	247.5	751.5	1608.1	880.4	305.9	239.1	249.3	221.9	178.2	5188.7
MEDIAN	162.2	150.9	187.7	232.8	773.7	1479.7	843.5	280.2	223.7	244.4	228.5	188.4	5111.3
80 PERCENTILE	125.9	127.5	150.6	179.3	497.3	1129.4	436.3	184.5	165.0	189.6	192.7	155.7	3987.0
60 PERCENTILE	147.4	141.4	179.2	205.4	680.7	1518.9	696.8	236.9	196.6	232.2	214.0	179.1	4880.4
40 PERCENTILE	164.4	150.7	197.2	254.4	805.6	1707.8	911.9	303.7	259.3	263.5	238.8	193.3	5605.5
20 PERCENTILE	182.2	188.3	215.5	304.8	952.0	2076.9	1113.8	432.3	300.8	309.0	258.4	202.4	6113.2
MAXIMUM	211.3	229.3	331.2	521.5	1229.5	2435.0	1585.4	551.0	412.3	422.0	295.9	251.6	7233.6
MINIMUM	96.9	104.7	125.8	84.0	325.0	900.0	249.0	75.5	103.8	164.9	155.6	126.2	3284.6

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMENDED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
INFLOW BOYSEN RESERVOIR

78/03/15.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1934	39.7	30.6	57.2	53.3	86.7	62.5	0.0	0.0	31.3	47.7	36.8	32.5	478.4
1940	30.3	29.1	36.8	27.0	43.3	11.2	0.0	0.0	60.5	64.7	33.5	40.5	376.1
1941	37.6	28.3	45.0	64.9	179.3	204.7	30.2	90.6	60.5	129.2	69.3	54.5	994.0
1942	46.1	42.9	59.6	89.1	183.1	235.2	110.8	0.0	30.2	65.7	60.5	48.4	971.7
1943	52.5	50.8	71.2	133.3	188.8	354.6	285.8	62.6	45.1	66.0	57.5	46.0	1414.4
1944	35.8	36.7	45.8	71.7	222.1	457.7	174.6	0.0	14.8	67.0	47.5	41.0	1217.9
1945	44.8	34.7	55.4	60.8	125.6	266.5	230.7	50.9	65.1	100.0	52.6	43.0	1134.8
1946	46.9	45.1	58.6	75.4	83.7	206.0	67.9	0.0	51.1	96.0	58.1	46.1	836.8
1947	37.7	41.9	58.4	62.5	287.1	470.0	316.5	92.2	45.4	92.6	70.3	50.5	1621.8
1948	52.1	56.6	73.6	70.7	146.8	295.7	70.0	5.4	39.3	63.1	48.9	43.6	967.7
1949	38.3	41.1	64.8	69.9	187.5	263.9	81.2	6.1	49.1	97.8	73.1	46.5	1019.0
1950	42.5	40.4	54.6	57.1	102.1	359.6	254.5	43.2	85.6	112.2	75.9	54.6	1288.5
1951	47.7	54.2	63.4	67.4	225.7	353.1	251.3	106.7	53.4	132.6	61.9	44.8	1460.1
1952	47.7	43.6	46.4	105.1	224.4	283.0	77.5	43.2	32.6	60.4	46.2	48.0	1061.7
1953	51.4	40.5	42.4	47.3	57.7	264.5	42.9	28.6	21.1	60.9	59.8	48.0	765.1
1954	51.3	46.5	46.1	42.4	196.2	120.4	121.4	25.3	29.1	61.7	48.8	38.5	829.6
1955	36.5	27.8	31.0	44.7	65.3	132.9	33.0	8.9	16.8	59.1	44.5	57.3	560.8
1956	44.5	39.2	51.0	56.1	220.4	393.0	107.7	37.2	29.3	57.6	50.7	42.7	1139.7
1957	36.3	35.2	43.2	55.5	183.9	502.5	305.4	65.2	58.4	115.6	69.5	58.5	1529.3
1958	48.8	51.5	52.5	50.6	297.7	127.6	11.6	29.1	23.0	58.6	50.6	47.1	844.4
1959	35.8	40.5	62.9	43.9	46.1	208.2	25.5	21.1	19.9	72.5	32.2	42.6	676.7
1960	36.1	28.6	52.3	52.7	26.7	53.8	0.0	0.0	15.0	68.1	52.3	36.9	422.9
1961	28.5	30.5	32.6	22.2	78.4	189.9	0.0	4.9	31.4	76.2	56.9	38.5	590.4
1962	40.9	94.3	43.6	89.6	130.3	353.8	137.7	31.5	40.3	66.8	50.1	40.9	1122.1
1963	30.8	41.6	46.3	46.7	86.8	418.8	92.7	31.3	70.4	66.9	48.8	38.9	1019.9
1964	37.7	32.5	40.1	56.0	114.1	307.7	186.9	14.5	19.4	61.5	40.6	38.4	949.4
1965	45.6	34.0	41.8	82.1	100.1	512.2	364.9	98.8	68.5	108.0	72.3	55.2	1588.4
1966	31.7	36.8	57.1	51.3	73.2	56.9	15.1	20.5	44.2	74.9	50.7	42.5	556.8
1967	36.6	39.4	54.6	83.6	159.0	593.7	409.8	44.0	53.5	90.9	68.6	53.0	1648.6
1968	36.9	48.2	75.1	54.5	76.7	331.4	75.2	75.9	55.8	93.2	87.4	53.4	1061.6
1969	46.1	38.9	59.4	69.7	148.9	272.2	79.9	26.3	37.2	69.6	52.6	42.6	942.3
1970	35.7	35.6	35.6	42.4	123.0	242.7	67.5	14.5	29.3	56.0	53.6	37.4	773.7
1971	36.5	45.8	57.5	51.4	181.8	624.6	208.6	56.0	74.6	100.4	66.8	57.4	1581.1
1972	52.0	74.7	77.4	59.1	188.0	442.9	121.6	69.2	53.4	83.3	60.0	43.5	1327.0
1973	39.9	35.6	53.4	118.8	250.1	160.2	119.7	43.2	176.9	107.2	80.8	52.2	1235.9
1974	40.3	41.0	71.7	84.9	157.9	405.6	144.7	51.5	50.8	71.6	53.8	37.8	1211.5
1975	36.8	32.4	56.5	45.2	114.1	264.1	388.0	67.8	49.2	4.4	3.8	3.1	1065.5
AVERAGE	41.3	43.3	53.2	62.8	144.9	292.0	135.5	36.9	44.6	77.8	55.8	44.5	1034.8
MEDIAN	39.7	40.3	53.4	56.1	146.8	272.2	92.7	29.1	43.4	69.6	53.6	43.6	1019.0
80 PERCENTILE	36.1	32.6	41.6	45.7	79.7	132.9	25.3	4.9	23.0	60.9	48.8	38.5	676.7
60 PERCENTILE	38.3	38.3	49.8	53.3	114.1	242.7	75.2	21.1	32.6	66.9	52.2	42.6	949.4
40 PERCENTILE	42.4	41.1	57.1	82.1	179.3	331.4	121.4	43.2	50.8	76.2	58.1	46.5	1122.1
20 PERCENTILE	47.7	54.2	62.9	75.4	196.2	419.8	230.7	62.6	60.5	100.0	69.3	53.0	1327.0
MAXIMUM	52.5	94.3	77.4	133.3	297.7	624.6	409.8	106.7	176.9	132.6	87.4	58.5	1648.6
MINIMUM	28.5	27.8	31.0	22.2	26.7	11.2	0.0	0.0	14.8	47.7	33.5	32.5	376.1

STUDY NO. 1

YELLOWSTONE LEVEL 4 OPERATION STUDY
2000 RECOMENDED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
WIND RIVER AT BOYSEN

78/03/15.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	54.7	54.7	1.2	.7	0.0	0.0	0.0	72.0	72.0	54.0	53.0	51.9	424.2
1940	52.4	52.4	0.0	0.0	0.0	0.0	0.0	72.0	72.0	35.9	34.9	33.9	355.6
1941	34.5	34.5	50.6	59.2	57.2	71.8	30.2	90.6	72.0	120.4	119.2	118.0	865.1
1942	113.4	113.4	73.5	73.1	74.2	72.1	64.9	72.0	72.0	77.1	76.0	75.0	970.6
1943	73.4	73.4	133.0	161.9	161.0	159.1	152.7	72.0	72.0	90.9	89.8	88.6	1333.9
1944	89.1	89.1	135.0	140.3	139.5	137.7	131.1	72.0	72.0	66.6	65.5	64.5	1202.2
1945	65.0	65.0	97.7	97.3	96.4	94.5	88.0	72.0	72.0	102.3	101.1	100.0	1051.3
1946	100.3	100.4	42.7	42.3	41.3	39.1	31.7	72.0	72.0	85.0	83.8	82.7	793.4
1947	83.2	83.2	135.0	197.6	196.8	195.1	188.8	92.2	72.0	107.8	106.6	105.5	1564.0
1948	105.9	105.9	73.9	74.5	75.6	73.4	66.1	72.0	72.0	72.3	71.2	70.2	938.0
1949	70.6	70.6	82.3	82.1	81.2	79.0	71.6	72.0	72.0	91.5	90.4	89.3	952.8
1950	89.7	89.7	111.9	111.5	110.7	108.9	102.6	72.0	85.6	114.1	112.9	111.8	1221.8
1951	112.2	112.2	135.0	134.8	134.0	132.3	125.9	106.7	72.0	115.7	114.5	113.3	1408.7
1952	113.7	113.7	88.9	88.5	87.6	86.0	77.5	72.0	72.0	83.2	82.0	80.9	1046.2
1953	81.4	81.4	37.5	37.4	35.4	34.3	27.1	72.0	72.0	80.1	79.0	77.9	716.8
1954	76.4	76.4	54.3	53.9	53.0	50.7	43.4	72.0	72.0	73.2	72.1	71.0	772.4
1955	71.5	71.5	7.9	7.5	6.5	4.1	0.0	72.0	72.0	70.9	69.9	68.8	522.5
1956	69.3	69.3	115.7	115.3	114.4	112.5	105.4	72.0	72.0	76.1	75.0	73.9	1071.0
1957	74.4	74.4	135.0	172.5	171.7	170.1	164.2	72.0	72.0	116.7	115.5	114.3	1452.5
1958	114.7	114.7	50.3	49.9	49.0	73.6	11.6	72.0	72.0	73.4	72.3	71.2	824.9
1959	71.7	71.7	25.6	26.2	25.2	22.9	15.4	72.0	72.0	73.9	72.7	71.6	621.7
1960	72.0	72.0	0.0	0.0	0.0	0.0	0.0	72.0	72.0	38.7	37.7	36.7	401.3
1961	37.3	37.3	18.3	17.9	18.9	21.6	0.0	72.0	72.0	74.9	73.8	72.7	514.7
1962	73.2	73.2	110.3	109.9	108.9	106.9	99.9	72.0	72.0	78.5	77.1	76.0	1057.7
1963	76.5	76.5	86.3	85.9	85.0	83.1	76.3	72.0	72.0	86.1	84.9	83.8	968.4
1964	84.3	84.3	85.6	85.2	84.4	82.5	76.0	72.0	72.0	67.8	66.7	65.6	926.4
1965	66.1	66.1	135.0	179.1	177.3	175.7	170.2	98.8	72.0	114.6	113.4	112.2	1479.7
1966	112.6	112.6	0.0	0.0	0.0	0.0	0.0	72.0	72.0	65.4	64.3	63.3	562.1
1967	65.8	65.8	135.0	218.7	44.8	302.8	296.2	72.0	72.0	94.4	98.2	97.1	1563.8
1968	97.5	97.5	67.7	67.3	66.4	64.3	57.3	75.9	72.0	114.0	112.8	111.6	1004.4
1969	112.0	112.0	65.2	65.8	64.9	62.8	55.6	72.0	72.0	78.7	77.5	76.4	916.0
1970	76.9	76.9	49.1	48.7	47.7	45.6	38.4	72.0	72.0	69.5	68.4	67.3	732.4
1971	67.8	67.8	135.0	190.1	189.2	187.5	181.1	72.0	74.6	113.7	112.5	111.3	1502.7
1972	111.3	111.3	125.6	125.4	124.5	122.6	115.7	72.0	72.0	99.8	98.6	97.5	1277.6
1973	97.9	97.9	82.6	82.2	81.3	79.0	71.5	72.0	176.9	111.5	110.3	109.2	1172.3
1974	109.5	109.6	114.5	115.9	113.0	111.1	104.4	72.0	72.0	88.2	87.0	85.9	1180.8
1975	86.3	86.3	117.9	117.4	116.6	114.9	109.4	72.0	72.0	45.4	44.2	43.1	1025.5
AVERAGE	93.2	83.2	79.3	97.5	82.0	88.6	79.7	74.8	75.3	84.5	83.4	82.3	983.6
MEDIAN	76.9	76.9	82.3	82.1	75.4	79.0	71.5	72.0	72.0	80.1	79.0	77.9	968.4
80 PERCENTILE	66.1	66.1	26.6	26.2	25.2	22.9	11.6	72.0	72.0	69.5	68.4	67.3	621.7
60 PERCENTILE	73.2	73.2	66.2	65.8	57.2	71.8	55.6	72.0	72.0	76.1	75.0	73.9	916.0
40 PERCENTILE	94.3	84.3	88.9	88.5	85.0	86.0	77.5	72.0	72.0	88.2	87.0	85.9	1051.3
20 PERCENTILE	109.5	109.6	135.0	134.8	124.5	132.3	125.9	72.0	72.0	111.5	110.3	109.2	1277.6
MAXIMUM	118.4	118.4	135.0	218.7	196.8	302.8	296.2	106.7	176.9	120.4	119.2	118.0	1564.0
MINIMUM	34.5	34.5	0.0	0.0	0.0	0.0	0.0	72.0	72.0	35.9	34.9	33.9	353.6

STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 78/03/15.
2000 RECOMMENDED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
GREYBULL RIVER AT BASIN

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	6.1	5.0	11.5	5.7	2.0	2.2	0.0	0.0	0.0	.2	.7	5.6	39.0
1940	5.4	4.4	5.8	2.9	14.7	8.5	1.2	0.0	1.1	5.9	6.5	7.1	55.7
1941	4.5	5.9	5.9	11.1	17.4	61.0	15.9	55.6	40.3	30.4	17.6	8.7	272.3
1942	4.6	6.1	10.2	17.5	43.6	58.7	12.5	2.2	3.8	6.3	6.1	6.0	179.8
1943	6.3	7.0	15.3	26.5	17.1	57.3	42.5	6.2	5.3	4.1	9.2	8.0	203.4
1944	6.5	6.5	7.3	13.3	45.5	81.7	29.7	2.3	1.0	4.3	7.6	6.2	211.8
1945	5.5	6.1	11.4	5.6	6.5	68.0	48.1	11.9	9.1	7.9	10.0	9.1	203.2
1946	8.2	7.0	10.9	12.7	5.2	16.6	6.5	2.1	13.5	14.4	11.1	6.9	113.1
1947	5.7	5.1	5.1	13.6	22.1	46.1	45.0	6.4	3.8	7.0	11.5	7.3	179.5
1948	6.2	5.0	12.4	16.9	14.0	41.5	15.2	5.2	3.6	5.8	8.3	7.2	142.1
1949	6.0	4.9	12.2	11.0	4.8	30.5	4.6	1.0	.8	4.8	7.8	4.7	92.5
1950	4.3	6.2	7.0	6.3	5.2	5.7	5.9	5.5	6.9	9.3	10.0	9.1	79.4
1951	5.3	5.2	5.7	7.5	5.2	31.1	46.6	12.4	4.4	11.2	9.0	6.4	151.5
1952	5.7	5.0	8.7	34.2	48.1	59.7	10.5	5.9	1.1	1.7	6.5	6.2	192.1
1953	7.1	5.4	7.8	4.8	2.1	25.5	.7	.8	.4	3.1	5.1	6.3	69.1
1954	5.1	5.4	5.5	7.6	2.7	4.4	1.7	0.0	.5	1.3	1.5	4.7	40.2
1955	4.2	4.4	5.1	6.4	.1	1.2	.2	0.0	.2	.6	4.4	6.3	33.1
1956	4.5	4.3	7.3	1.8	2.0	7.2	1.3	1.0	1.2	2.2	5.6	5.5	44.0
1957	5.0	5.1	6.0	5.9	29.9	172.0	57.5	5.5	5.6	4.9	10.5	8.0	310.3
1958	6.1	5.3	5.6	9.1	39.5	24.8	9.7	5.1	1.5	1.7	6.7	6.7	119.9
1959	5.5	5.4	7.4	5.8	3.4	5.3	2.0	.4	.5	4.3	5.5	5.5	52.1
1960	5.1	5.9	7.9	3.5	0.0	.2	0.0	0.0	.4	1.1	4.0	3.3	29.4
1961	5.1	5.6	7.1	.2	0.0	9.7	1.4	.4	9.0	6.9	9.4	5.4	56.4
1962	5.0	15.6	11.2	18.1	4.3	47.0	12.8	6.2	2.7	1.5	6.1	7.1	135.6
1963	5.1	6.5	11.4	5.8	7.9	154.1	7.6	.8	4.1	2.2	7.2	5.8	218.1
1964	6.4	5.4	7.0	7.9	13.7	64.4	46.9	1.9	1.3	1.2	3.4	2.7	162.6
1965	3.0	6.5	4.6	12.2	9.4	103.0	65.0	9.8	13.8	11.4	9.8	6.5	253.0
1966	7.1	5.4	6.3	2.6	0.0	.8	.4	.7	1.9	1.9	7.3	5.6	40.0
1967	4.2	4.1	7.3	2.8	5.5	116.4	58.7	3.1	3.2	3.1	8.6	5.8	222.8
1968	5.5	6.2	7.7	4.7	1.6	24.3	1.9	9.6	4.5	3.9	5.9	6.2	83.8
1969	6.3	5.4	7.9	10.9	3.0	25.6	10.1	1.0	2.2	4.2	7.6	6.3	90.0
1970	5.8	4.9	6.8	4.8	8.4	29.3	5.2	.7	2.5	3.3	7.5	6.4	83.2
1971	5.4	5.3	6.3	6.2	9.6	77.1	7.0	2.4	2.6	12.4	9.0	3.2	146.7
1972	4.3	7.5	11.5	6.5	3.2	34.7	2.0	4.5	1.7	5.0	8.4	6.1	100.4
1973	4.4	5.7	12.8	6.3	27.5	12.0	7.6	2.1	18.8	0.0	0.0	0.0	99.9
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGE	4.9	5.4	7.9	8.8	11.8	40.8	15.3	4.5	4.6	5.1	6.9	5.8	121.8
MEDIAN	5.1	5.4	7.5	6.8	5.2	29.3	7.0	2.1	2.5	3.9	7.3	6.2	100.4
80 PERCENTILE	3.9	4.5	5.9	3.5	2.0	4.6	1.2	.4	.5	1.3	4.4	4.7	44.0
60 PERCENTILE	4.6	5.1	7.0	6.2	5.2	24.3	4.8	1.0	1.5	3.1	6.5	5.8	83.8
40 PERCENTILE	5.5	5.5	7.8	9.3	8.5	81.3	10.1	5.1	3.3	4.3	8.1	6.3	142.1
20 PERCENTILE	6.3	6.3	11.4	12.7	17.4	64.8	42.5	6.2	4.5	7.0	9.4	7.2	203.2
MAXIMUM	8.2	15.6	15.3	34.2	48.1	172.0	65.0	55.6	40.3	30.4	17.6	9.1	310.3
MINIMUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMENDED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
INFLOW BUFFALO BILL RESERVOIR

78/03/15.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1935	16.5	16.9	27.6	53.4	184.7	231.7	102.7	44.2	21.4	27.4	31.2	19.8	837.0
1936	18.5	15.5	19.1	34.1	169.9	239.7	72.6	25.5	25.7	32.2	26.9	25.7	699.6
1941	15.1	16.4	17.9	29.0	161.6	254.1	114.7	112.4	92.6	63.5	35.5	27.3	987.2
1942	17.6	15.0	16.7	55.2	150.6	243.4	211.2	35.3	17.6	15.0	19.1	17.8	830.4
1943	14.4	17.4	27.7	184.2	174.7	416.2	302.7	95.8	34.1	22.3	26.9	18.8	1374.9
1944	15.5	16.9	15.4	22.6	133.2	267.6	182.3	30.7	18.8	17.8	14.5	16.7	747.9
1945	13.4	14.3	14.3	20.7	104.0	261.0	283.0	71.8	34.5	32.7	26.2	21.2	898.2
1946	15.7	14.5	22.5	84.2	119.6	278.1	142.8	33.7	28.0	24.7	20.7	17.8	801.3
1947	14.8	15.0	15.2	35.4	210.2	272.5	268.2	82.1	29.5	35.0	25.2	20.2	1020.8
1948	19.8	16.5	15.7	32.2	206.7	375.7	128.1	26.6	15.6	14.0	13.3	10.4	868.1
1949	5.9	14.7	8.5	66.2	195.5	322.0	124.0	19.4	17.1	23.8	24.0	15.2	820.1
1950	12.8	9.1	17.1	37.7	100.1	340.5	292.2	51.6	56.8	60.2	37.7	30.0	1045.5
1951	18.7	20.2	19.1	54.0	227.4	305.3	345.4	116.7	43.2	35.0	26.9	21.5	1231.0
1952	15.9	15.6	14.0	86.4	194.4	316.1	134.0	45.8	22.6	15.8	14.4	15.9	893.1
1953	15.2	15.2	18.7	36.6	77.9	323.5	187.2	37.3	21.9	16.4	19.1	15.1	781.8
1954	15.7	15.8	17.5	45.1	224.4	232.5	210.1	30.9	18.0	13.1	13.4	15.5	845.1
1955	9.2	9.4	11.1	21.4	99.9	248.5	125.9	31.0	15.0	15.4	18.5	21.1	625.9
1956	16.9	12.2	25.8	61.0	275.2	446.2	176.4	44.6	22.2	18.2	20.3	17.7	1137.5
1957	15.5	11.9	15.0	27.9	221.7	427.5	235.4	55.1	40.8	27.0	20.9	21.0	1115.4
1958	18.1	15.4	14.2	25.2	285.4	237.6	82.1	32.4	18.9	13.6	24.6	18.3	783.5
1959	17.5	15.5	15.1	35.0	86.0	406.2	152.5	36.9	22.4	31.8	24.0	18.8	862.2
1960	16.2	14.2	22.8	34.4	90.5	245.1	77.0	26.4	18.8	17.4	15.0	12.9	590.4
1961	10.6	9.9	15.1	14.0	138.9	299.4	66.6	19.6	54.1	51.9	34.9	19.7	732.4
1962	18.9	20.3	19.4	91.3	133.3	362.4	200.1	64.6	26.8	20.9	19.8	17.9	995.0
1963	15.9	20.5	17.0	30.2	192.0	407.4	166.4	31.6	30.8	15.7	21.7	20.2	969.1
1964	18.7	17.0	16.5	27.6	155.3	307.3	296.6	42.6	15.5	16.0	21.5	25.9	960.2
1965	21.4	16.7	19.7	60.8	157.1	462.1	349.8	93.3	54.1	44.6	30.9	25.3	1335.5
1966	21.3	16.0	24.8	35.7	161.7	205.9	105.5	34.2	33.2	21.7	25.1	20.2	707.5
1967	14.3	14.3	19.4	22.2	156.1	460.5	311.5	54.1	22.1	25.5	28.9	21.4	1154.0
1968	20.9	19.0	21.9	19.5	72.3	335.9	182.4	83.7	46.6	27.0	23.4	22.8	875.1
1969	21.5	18.2	21.2	64.3	206.3	223.6	134.7	34.0	23.2	22.8	26.2	19.7	815.4
1970	18.6	18.9	17.9	18.7	207.1	427.7	207.0	47.7	35.3	27.7	25.4	20.5	1070.2
1971	20.5	17.5	17.6	39.0	190.0	495.7	301.2	86.0	39.3	36.3	29.8	19.5	1292.0
1972	19.2	16.7	22.5	27.7	148.0	155.4	113.8	35.6	39.2	39.5	32.1	22.7	671.1
1973	22.1	14.5	35.8	32.1	141.2	417.9	164.1	79.0	53.8	22.0	31.8	23.4	1046.4
1974	20.4	17.1	21.2	65.8	171.4	552.0	256.9	59.9	25.1	22.4	27.0	20.5	1259.9
1975	20.0	16.5	19.8	25.3	95.2	270.5	426.0	70.9	30.7	-.0	-.0	-.0	972.4
AVERAGE	16.3	15.0	18.7	49.5	162.8	327.4	199.6	52.0	31.5	26.1	23.7	19.3	935.5
MEDIAN	16.8	14.3	17.9	35.0	161.0	307.3	176.4	42.6	25.7	22.8	24.6	19.8	875.1
80 PERCENTILE	13.8	11.9	14.2	22.8	109.0	239.7	119.7	30.9	18.8	15.8	19.1	16.7	747.9
60 PERCENTILE	15.7	15.5	15.7	32.1	148.0	278.1	152.5	34.2	22.4	21.7	21.7	18.8	837.0
40 PERCENTILE	18.1	16.4	19.1	37.7	173.7	353.9	200.1	46.2	30.8	27.0	26.2	20.5	960.2
20 PERCENTILE	19.5	18.0	22.3	61.0	206.3	417.9	283.0	79.0	40.8	35.0	29.8	22.7	1115.4
MAXIMUM	22.1	20.5	35.8	145.2	285.4	552.0	382.7	116.7	92.6	63.5	37.7	30.0	1374.9
MINIMUM	5.9	9.1	8.5	14.0	72.3	155.4	66.6	19.4	15.0	13.1	13.3	10.4	590.4

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
SHOSHONE RIVER AT STYX

78/03/15.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	77.1	50.5	37.0	17.7	14.5	5.8	37.1	37.3	33.2	23.3	64.7	67.5	465.0
1940	25.2	33.5	29.5	17.7	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	368.3
1941	25.3	23.8	24.7	5.8	0.0	0.0	37.1	37.3	33.2	58.9	83.1	83.1	413.8
1942	74.2	52.4	28.2	17.7	15.0	4.6	79.2	37.3	33.2	21.7	64.7	67.5	496.5
1943	25.8	23.8	24.7	17.7	140.2	131.6	259.7	37.3	33.2	37.3	64.7	67.5	854.4
1944	49.3	52.3	24.7	12.2	0.0	0.0	50.3	37.3	33.2	21.7	64.7	67.5	412.3
1945	25.3	23.8	24.7	5.8	0.0	0.0	151.0	37.3	33.2	34.5	64.7	67.5	469.3
1946	40.2	54.1	31.3	17.7	14.1	10.5	37.1	37.3	33.2	21.7	64.7	67.5	434.6
1947	25.3	23.8	24.7	5.8	26.4	15.4	136.1	37.3	33.2	30.9	64.7	67.5	502.1
1948	47.4	53.8	25.2	17.7	52.7	74.4	37.1	37.3	33.2	21.7	64.7	67.5	564.4
1949	25.3	23.8	24.7	5.8	16.1	7.9	37.1	37.3	33.2	21.7	64.7	67.5	366.6
1950	25.8	23.8	24.7	5.8	0.0	0.0	160.4	37.3	33.2	47.7	72.0	72.0	503.7
1951	68.1	54.8	27.8	17.7	71.2	62.7	211.3	37.3	33.2	48.6	72.8	72.8	782.8
1952	68.4	53.0	24.7	17.7	78.2	69.7	37.1	37.3	33.2	21.7	64.7	67.5	573.6
1953	25.8	23.8	24.7	5.8	0.0	0.0	55.3	37.3	33.2	21.7	64.7	67.5	360.8
1954	25.8	23.8	24.7	12.1	22.3	13.8	74.0	37.3	33.2	21.7	64.7	67.5	424.9
1955	25.3	23.8	24.7	5.8	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	342.5
1956	25.4	23.8	24.7	5.8	145.0	135.7	44.4	37.3	33.2	21.7	64.7	67.5	631.6
1957	25.8	23.8	24.7	5.8	116.3	107.9	103.4	37.3	33.2	29.2	64.7	67.5	642.4
1958	28.4	44.4	24.7	15.5	53.2	44.6	37.1	37.3	33.2	21.7	64.7	67.5	476.5
1959	24.4	23.8	24.7	5.8	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	342.5
1960	25.4	23.8	24.7	17.7	0.0	0.0	37.1	37.3	33.2	21.7	64.7	59.6	345.5
1961	21.4	18.8	22.7	5.8	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	329.6
1962	25.4	23.8	24.7	17.7	53.7	43.3	68.1	37.3	33.2	25.4	64.7	67.5	487.3
1963	26.7	44.4	25.5	17.7	93.2	84.9	37.1	37.3	33.2	21.7	64.7	67.5	556.7
1964	25.4	23.8	24.7	14.4	22.3	13.8	164.6	37.3	33.2	21.7	64.7	67.5	513.2
1965	27.1	25.3	29.1	17.7	116.4	110.1	217.9	37.3	33.2	51.4	75.7	75.6	818.8
1966	71.7	53.6	38.5	17.7	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	442.5
1967	25.8	23.4	23.7	5.8	77.3	64.4	179.7	37.3	33.2	27.2	64.7	67.5	638.0
1968	31.7	45.5	31.5	10.7	0.0	0.0	50.5	37.3	33.2	40.2	64.7	67.5	412.3
1969	57.2	57.6	30.7	17.7	25.5	14.9	37.1	37.3	33.2	21.7	64.7	67.5	467.0
1970	25.8	23.8	24.7	5.8	96.3	83.1	75.1	37.3	33.2	28.3	64.7	67.5	571.5
1971	31.4	47.1	27.1	17.7	140.4	132.5	169.4	37.3	33.2	41.2	65.5	67.5	810.4
1972	54.5	38.1	35.9	17.7	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	415.5
1973	25.8	24.8	41.5	17.7	74.0	63.7	37.2	37.3	33.2	41.5	65.8	67.5	531.0
1974	60.2	54.5	30.7	17.7	172.3	164.0	127.1	37.3	33.2	27.7	64.7	67.5	858.7
1975	30.9	44.9	29.2	14.5	0.0	0.0	294.0	37.3	33.2	21.7	64.7	67.5	637.8
AVERAGE	36.9	35.3	27.5	15.2	45.2	40.0	89.1	37.2	33.2	28.5	66.0	68.2	520.7
MEDIAN	25.3	23.8	24.7	12.3	22.9	13.8	44.4	37.3	33.2	21.7	64.7	67.5	474.5
80 PERCENTILE	25.9	23.8	24.7	5.8	0.0	0.0	37.1	37.3	33.2	21.7	64.7	67.5	388.3
60 PERCENTILE	25.3	23.9	24.7	10.7	15.0	8.6	37.1	37.3	33.2	21.7	64.7	67.5	442.5
40 PERCENTILE	27.1	35.1	25.2	17.7	51.2	44.6	46.1	37.3	33.2	25.4	64.7	67.5	503.7
20 PERCENTILE	57.2	52.4	30.7	17.7	93.2	84.9	151.0	37.3	43.2	37.3	64.7	67.3	631.6
MAXIMUM	74.2	54.8	41.5	17.7	172.3	164.0	294.7	37.3	33.2	58.9	83.1	83.1	858.7
MINIMUM	21.4	18.8	22.7	5.8	0.0	0.0	37.1	37.3	33.2	21.7	64.7	59.6	329.6

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMENDED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
INFLOW YELLOWTAIL RESERVOIR

76/03/15.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	166.9	131.4	134.7	62.8	103.5	79.7	0.0	64.6	107.9	125.3	165.1	168.6	1315.5
1940	102.7	124.9	84.2	59.0	55.3	94.8	35.4	62.0	114.0	161.7	154.7	133.7	1165.4
1941	100.0	102.7	147.8	119.7	164.9	234.9	56.8	189.8	196.8	262.7	291.2	245.0	2109.4
1942	225.1	214.3	233.3	233.4	277.8	382.9	135.0	80.7	129.1	176.0	205.1	175.8	2428.0
1943	97.3	154.1	265.1	259.7	330.3	430.8	509.0	66.3	125.5	187.3	219.4	189.1	2860.8
1944	163.2	168.3	215.1	236.5	376.0	510.6	291.9	92.6	132.6	155.5	194.4	159.8	2696.7
1945	131.5	131.8	200.4	157.2	144.9	335.2	366.8	133.6	190.9	229.3	241.1	225.7	2488.2
1946	192.1	197.2	161.7	154.2	159.6	193.1	117.5	99.1	186.2	182.2	211.6	199.8	2054.5
1947	137.9	183.5	246.7	281.8	410.8	399.9	509.0	131.0	126.9	231.6	242.1	224.6	3085.4
1948	189.4	240.9	246.6	175.5	261.6	290.9	136.6	99.3	137.9	163.1	197.2	157.9	2297.0
1949	136.5	123.6	227.5	146.3	180.6	243.2	106.5	73.1	133.1	185.0	215.2	196.3	1953.0
1950	163.9	176.4	211.3	172.6	161.2	215.1	268.1	122.0	161.5	248.9	246.7	245.0	2392.7
1951	215.0	233.2	229.7	205.7	209.2	293.1	426.2	183.4	140.4	246.3	255.9	221.5	2859.4
1952	237.7	222.6	174.3	205.6	322.8	288.9	110.6	86.6	104.4	158.2	192.5	188.4	2295.5
1953	155.2	147.9	107.5	84.9	66.6	210.7	54.3	81.6	107.2	157.5	205.4	189.4	1568.2
1954	139.0	152.3	129.6	96.1	157.4	110.6	89.8	71.8	106.0	160.4	190.9	182.9	1586.7
1955	113.6	126.5	96.9	95.5	112.7	177.4	36.7	76.6	113.2	162.9	177.2	177.2	1466.2
1956	126.5	123.6	225.9	165.6	331.7	316.4	113.0	76.6	118.3	146.3	181.3	170.1	2097.7
1957	113.8	136.4	207.1	219.7	395.0	571.3	296.6	85.9	132.9	227.4	252.0	227.2	2865.2
1958	173.4	195.6	124.0	90.4	233.9	203.3	3.1	102.9	116.2	158.5	194.4	187.2	1782.5
1959	141.3	143.1	130.5	85.1	69.3	178.8	83.8	77.7	122.1	182.6	190.0	187.8	1592.5
1960	129.5	134.5	119.1	59.5	8.7	61.9	0.0	75.2	129.5	127.4	152.3	128.8	1131.2
1961	88.6	107.0	91.5	52.8	67.3	75.9	0.0	61.7	166.0	177.7	190.3	160.6	1241.5
1962	104.3	202.1	252.7	241.4	285.7	354.8	214.4	115.5	148.2	178.2	206.0	171.9	2475.2
1963	119.1	148.3	162.0	148.5	277.3	471.9	141.3	99.4	161.1	194.4	227.2	186.3	2386.6
1964	152.6	154.9	178.1	171.1	285.0	452.8	282.7	105.7	139.1	166.4	201.7	173.6	2464.6
1965	151.1	145.6	219.8	270.8	399.1	602.0	520.5	173.2	176.3	267.8	206.1	232.5	3364.6
1966	209.1	201.4	77.8	43.2	30.5	7.1	0.0	72.0	121.4	140.0	172.9	168.1	1243.5
1967	191.7	125.7	222.1	256.4	222.5	759.5	609.8	113.5	166.4	211.4	214.0	218.3	3251.2
1968	196.1	217.7	174.9	123.8	153.6	459.7	149.2	175.4	166.7	235.2	247.9	227.3	2527.5
1969	210.6	220.8	164.4	161.2	183.9	206.0	128.4	94.5	120.7	187.8	206.9	196.6	2082.1
1970	142.7	154.6	130.6	90.6	316.0	356.2	163.7	94.3	136.8	174.9	204.3	185.0	2156.4
1971	163.4	173.4	227.4	291.1	472.1	560.5	358.9	94.3	148.5	289.1	271.9	238.1	3290.6
1972	221.4	264.6	275.2	198.7	240.7	416.0	151.3	134.7	149.0	207.5	236.8	200.1	2695.6
1973	171.7	166.3	207.5	171.4	353.0	323.4	135.1	104.4	300.0	247.4	251.6	237.3	2669.1
1974	224.0	220.5	211.2	212.3	398.9	447.9	236.3	95.8	144.6	193.1	217.0	190.1	2791.7
1975	160.2	182.1	231.9	214.6	284.0	415.5	608.4	122.7	150.7	72.9	114.0	114.8	2676.7
AVERAGE	156.5	164.7	182.4	162.3	230.2	316.1	201.4	103.2	144.1	188.6	208.5	191.4	2254.3
MEDIAN	151.1	154.2	179.3	161.2	222.5	293.1	135.1	94.3	133.1	182.2	206.0	188.4	2297.0
80 PERCENTILE	113.8	126.5	124.0	85.1	103.5	177.4	38.7	75.2	116.2	156.2	190.0	168.6	1568.2
60 PERCENTILE	137.9	145.6	162.0	140.3	169.9	234.9	113.0	86.6	129.1	174.9	201.7	185.0	2097.7
40 PERCENTILE	163.4	176.4	211.2	172.6	277.3	342.4	151.3	99.3	140.4	187.8	214.0	196.3	2464.6
20 PERCENTILE	196.1	214.3	227.5	233.4	331.7	452.8	296.6	122.0	166.4	231.6	242.1	225.7	2791.7
MAXIMUM	237.7	264.6	275.2	291.1	472.1	759.5	609.8	189.8	300.0	289.1	291.2	245.0	3364.6
MINIMUM	88.6	102.7	77.8	43.2	8.7	7.1	0.0	61.7	104.4	125.3	134.7	128.8	1131.2

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
BIGHORN RIVER AT ST XAVIER

78/03/15.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1934	176.2	176.6	176.6	127.5	113.3	113.4	115.8	128.3	101.7	126.5	166.4	169.7	1692.1
1940	102.9	125.4	84.9	59.6	54.5	86.0	22.6	49.5	107.8	162.8	136.1	134.8	1127.0
1941	100.2	105.5	135.0	131.0	126.2	118.1	119.5	140.3	145.1	163.2	148.1	140.1	1572.9
1942	282.7	285.1	283.3	163.8	167.6	195.9	172.2	159.4	163.5	169.3	166.3	167.2	2376.4
1943	232.3	232.7	232.9	214.0	220.2	260.5	546.2	168.0	172.1	177.9	176.9	175.8	2809.5
1944	240.8	241.2	241.4	244.7	252.5	300.1	329.1	153.1	157.1	162.8	161.8	160.7	2645.2
1945	213.1	213.4	213.7	126.1	116.2	110.6	564.7	210.3	214.3	220.1	219.0	218.0	2437.5
1946	242.2	242.6	242.5	127.2	110.9	110.6	106.7	156.5	162.8	168.7	167.8	166.7	2007.4
1947	234.6	234.9	235.2	235.4	242.7	247.6	546.2	197.3	201.3	207.1	206.2	205.1	3035.7
1948	284.1	284.5	284.8	126.5	127.1	146.4	173.8	157.2	161.2	166.9	165.9	164.8	2245.0
1949	218.4	218.8	219.0	128.0	111.5	110.4	100.7	153.2	157.5	163.4	162.4	161.4	1904.7
1950	242.4	242.7	243.0	127.1	110.5	110.2	181.0	211.1	215.1	221.0	220.0	218.9	2343.0
1951	284.5	284.8	285.1	127.4	117.5	134.9	465.3	215.6	219.5	225.3	224.3	223.2	2607.4
1952	271.7	272.1	272.3	152.5	155.5	181.0	147.8	152.1	156.2	161.9	161.0	159.9	2243.7
1953	195.4	195.6	196.0	127.6	114.3	113.5	109.0	121.9	131.2	163.9	155.5	190.5	1812.9
1954	119.9	120.5	129.3	130.1	113.9	112.6	112.3	123.5	133.5	166.5	192.5	184.0	1638.6
1955	124.9	126.0	134.1	141.5	125.0	119.2	83.1	64.1	107.0	164.1	178.5	178.3	1545.8
1956	127.0	124.1	138.0	142.5	118.7	111.4	100.7	131.6	136.0	149.7	142.3	130.7	1553.2
1957	211.0	211.3	211.6	263.5	272.3	324.5	333.8	191.2	195.3	201.1	200.2	199.2	2814.9
1958	222.6	223.2	223.4	126.9	112.1	110.4	102.3	116.1	122.9	153.8	145.3	121.3	1782.6
1959	181.7	182.0	182.3	127.6	114.0	113.5	110.6	122.2	131.2	162.2	151.8	188.8	1767.8
1960	119.7	119.7	129.2	129.6	117.3	117.6	0.0	62.7	123.3	128.6	153.7	129.9	1330.2
1961	85.8	107.6	92.3	53.3	63.6	67.1	0.0	49.2	143.2	173.9	191.9	161.7	1192.6
1962	127.9	133.7	135.5	134.4	133.0	154.1	251.6	170.1	174.1	179.8	178.7	177.6	1950.4
1963	216.3	216.6	216.9	177.1	181.5	213.6	176.4	179.8	183.8	189.6	188.6	187.5	2335.7
1964	220.7	221.1	221.3	180.4	185.0	217.8	319.9	163.4	167.4	173.1	172.1	171.0	2413.2
1965	230.7	231.1	231.5	289.3	299.3	357.5	557.7	217.3	221.2	227.0	225.9	224.8	3313.0
1966	221.3	221.6	221.9	126.3	114.1	115.6	20.2	59.5	115.2	141.2	174.3	169.2	1701.0
1967	131.9	126.2	133.0	208.2	214.3	254.8	646.9	190.8	194.9	200.7	199.6	198.6	2705.0
1968	254.8	255.1	255.4	129.7	130.5	151.5	186.4	216.6	220.6	226.3	225.3	224.2	2476.3
1969	257.2	257.6	257.8	127.3	110.3	110.1	100.8	156.1	140.3	166.2	165.2	164.2	2035.4
1970	202.7	203.1	203.3	136.6	139.0	161.4	200.9	165.6	169.6	175.4	174.3	173.3	2105.1
1971	247.2	247.6	247.8	304.9	315.7	377.2	396.1	214.5	218.6	224.5	223.5	222.5	3240.1
1972	312.1	312.4	312.7	164.4	168.1	197.0	188.5	191.8	195.8	201.5	200.5	199.4	2644.1
1973	240.4	240.7	241.0	162.1	165.8	193.7	172.3	234.2	238.3	244.1	243.0	241.9	2617.7
1974	277.1	277.4	277.7	225.5	232.3	275.3	275.5	174.2	178.3	184.0	183.0	182.0	2740.3
1975	249.9	250.3	250.5	165.5	168.2	221.5	645.6	121.1	125.0	144.9	139.9	119.6	2640.1
AVERAGE	209.3	209.6	210.9	159.2	155.4	174.5	229.3	153.8	165.4	179.4	180.8	178.5	2205.4
MEDIAN	220.7	221.1	221.3	131.0	126.2	134.9	172.3	156.5	162.8	169.3	174.3	175.8	2243.7
50 PERCENTILE	127.0	126.0	138.0	127.4	112.1	110.6	100.7	121.9	131.2	162.2	153.7	160.7	1638.6
60 PERCENTILE	211.0	211.3	211.6	128.9	117.3	115.6	115.8	153.1	157.1	166.2	167.8	169.2	1950.4
40 PERCENTILE	236.3	232.7	232.9	142.5	139.0	161.4	186.4	166.0	172.1	177.9	183.0	184.8	2376.4
20 PERCENTILE	254.8	255.1	255.4	208.2	214.3	254.8	333.8	197.3	201.3	207.1	206.2	205.1	2705.0
MAXIMUM	312.1	312.4	312.7	304.9	315.7	377.2	646.9	234.2	238.3	244.1	243.0	241.9	3313.0
MINIMUM	85.8	105.3	84.9	53.3	54.5	67.1	0.0	49.2	101.7	126.5	136.1	121.3	1127.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
TONGUE RIVER AT MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	5.3	7.0	33.4	14.5	0.0	47.9	0.0	0.0	0.0	16.3	5.1	6.0	135.6
1940	4.1	5.1	7.3	0.0	0.0	7.9	0.0	0.0	0.0	17.5	4.0	3.9	50.0
1941	3.3	3.6	3.7	0.0	3.1	35.0	0.0	0.0	8.1	30.1	32.7	16.8	136.9
1942	7.2	5.0	25.0	19.1	26.5	87.9	0.0	0.0	0.0	26.3	28.9	16.8	243.5
1943	6.9	14.2	45.3	66.8	54.5	97.9	0.0	0.0	0.0	15.5	27.4	14.8	325.6
1944	7.4	5.2	31.6	25.8	70.5	211.9	87.5	0.0	0.0	13.5	32.4	15.8	499.5
1945	9.2	7.2	21.6	17.3	10.3	115.9	31.5	0.0	0.0	37.5	26.4	15.3	292.3
1946	11.4	9.7	40.6	26.2	25.7	95.2	18.0	0.0	11.2	30.6	31.6	18.9	337.0
1947	21.7	15.3	47.3	43.8	70.4	69.8	30.7	0.0	0.0	15.6	25.5	15.4	396.0
1948	11.8	14.0	43.4	39.3	52.8	71.4	50.0	0.0	0.0	17.0	30.8	8.0	338.4
1949	7.0	4.4	31.1	25.7	33.5	49.9	0.0	0.0	0.0	8.8	24.6	23.3	257.6
1950	7.7	5.8	17.6	20.7	17.0	20.3	0.0	0.0	3.2	19.6	22.1	10.5	144.4
1951	10.1	9.5	10.1	10.7	13.2	15.8	5.8	0.0	17.4	18.7	29.4	9.0	149.6
1952	5.9	6.5	27.8	83.4	49.4	42.8	0.0	0.0	0.0	19.1	11.1	10.0	255.7
1953	8.8	6.2	9.5	5.0	10.1	86.1	0.0	0.0	0.0	14.0	21.3	9.5	170.1
1954	8.2	11.5	10.2	10.0	.1	0.0	0.0	0.0	0.0	3.2	10.5	10.0	63.6
1955	6.7	2.9	12.1	23.5	35.3	53.2	2.6	0.0	0.0	.9	5.6	8.7	151.4
1956	7.1	6.2	25.9	49.5	22.2	43.5	0.0	0.0	0.0	3.1	15.3	11.1	183.7
1957	5.4	4.9	10.9	16.4	13.2	100.4	11.3	0.0	6.0	13.8	7.7	7.4	199.3
1958	7.5	6.5	10.4	3.7	15.8	18.5	10.1	0.0	0.0	11.8	13.1	12.2	114.5
1959	9.3	7.7	87.4	24.5	11.3	4.4	0.0	0.0	0.0	5.4	7.9	10.2	172.2
1960	9.0	8.0	46.1	16.4	0.0	0.0	0.0	0.0	0.0	0.0	3.3	1.7	84.4
1961	2.1	2.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	3.3	2.5	5.5	17.3
1962	5.7	12.3	31.1	53.3	33.2	108.8	1.0	0.0	1.8	13.0	10.1	7.9	258.1
1963	5.5	35.3	24.7	10.4	70.3	155.8	0.0	0.0	.1	.0	2.7	1.8	306.9
1964	6.1	7.8	8.4	14.8	35.4	131.6	34.6	0.0	5.4	11.2	9.6	7.9	272.5
1965	11.0	23.9	33.3	97.4	44.6	64.2	22.6	0.0	7.7	33.7	17.6	8.9	365.0
1966	6.2	5.1	11.9	5.1	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.6	34.9
1967	6.9	10.2	15.6	17.2	23.2	192.7	45.9	0.0	7.5	11.9	17.0	11.8	359.8
1968	18.6	27.7	44.3	23.5	17.5	147.4	19.6	15.9	24.4	30.7	16.1	9.4	391.0
1969	9.7	9.1	89.5	59.2	52.7	33.3	34.9	0.0	.1	10.0	5.9	10.8	315.1
1970	10.3	11.5	21.5	32.5	79.2	145.1	10.2	0.0	1.6	14.0	14.3	9.8	350.3
1971	6.7	96.8	105.2	55.2	57.1	85.6	0.0	0.0	2.5	40.2	18.7	9.4	480.3
1972	7.4	15.3	91.6	53.4	33.8	67.7	1.5	0.0	4.7	20.5	17.6	7.5	320.7
1973	11.5	12.3	13.7	15.4	70.6	102.0	5.7	0.0	13.1	26.3	21.0	7.1	298.9
1974	22.9	17.1	13.1	17.3	33.6	62.2	2.8	0.0	0.0	11.5	15.3	16.8	214.5
1975	27.7	7.0	56.3	46.6	96.7	148.9	117.5	26.2	5.8	0.0	0.0	0.0	532.8
AVERAGE	9.2	12.4	34.0	29.0	31.5	73.6	14.7	1.1	3.2	15.5	15.9	10.0	249.2
MEDIAN	7.7	7.7	23.0	19.1	25.7	64.2	1.0	0.0	0.0	14.0	15.3	9.5	255.7
80 PERCENTILE	5.7	5.1	10.2	10.0	5.1	15.8	0.0	0.0	0.0	3.3	5.6	6.7	135.6
60 PERCENTILE	7.1	6.5	15.6	17.2	17.0	47.9	0.0	0.0	0.0	11.9	11.1	8.9	183.7
40 PERCENTILE	8.9	9.7	31.1	25.7	33.6	85.6	5.7	0.0	.1	18.3	17.6	10.2	292.3
20 PERCENTILE	10.3	15.3	45.1	45.8	52.7	106.8	22.6	0.0	6.0	26.3	27.4	14.8	338.4
MAXIMUM	22.9	96.8	105.2	97.4	79.2	211.9	87.5	15.9	24.4	40.2	32.7	23.3	499.5
MINIMUM	2.1	2.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.7	17.3

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 PROJECTED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
YELLOWSTONE RIVER AT MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	365.2	258.1	460.9	399.6	795.2	1228.0	491.4	207.6	156.6	349.8	326.5	298.4	5335.5
1940	174.6	251.9	278.4	275.1	656.5	1234.9	233.5	30.9	136.2	499.9	299.4	288.2	4312.8
1941	223.4	236.5	325.9	324.9	656.0	1057.7	370.0	270.1	662.3	716.6	517.5	425.1	5784.1
1942	465.9	454.0	645.9	552.2	994.4	1775.5	1002.9	354.1	318.1	461.4	439.4	386.7	7855.7
1943	393.3	613.6	850.8	863.5	983.1	2542.2	2134.3	648.7	466.5	479.0	471.3	408.8	10855.1
1944	411.5	571.7	636.1	478.4	624.7	2636.5	1522.5	402.7	393.1	455.1	438.6	320.1	8889.1
1945	409.4	389.2	556.4	333.4	585.7	1720.5	1590.4	585.6	452.8	574.1	508.0	379.9	7985.3
1946	479.7	442.5	559.4	471.3	720.9	1457.5	646.2	273.4	406.2	529.3	452.5	356.8	6775.8
1947	823.0	521.5	590.0	629.4	1500.5	1757.2	1475.1	499.1	427.0	578.6	514.1	447.0	8840.7
1948	456.6	635.4	650.9	480.5	1062.2	2441.5	1059.6	400.7	269.3	431.2	442.9	273.7	8404.8
1949	282.4	336.5	625.8	499.0	986.8	1495.0	611.9	245.6	526.7	445.0	432.2	284.1	6571.6
1950	510.3	564.0	695.9	547.5	622.5	1717.6	1460.7	633.3	481.4	645.5	548.7	487.0	8519.7
1951	454.5	466.5	663.3	487.0	923.5	1449.9	1457.6	774.4	556.0	607.8	554.2	443.5	8869.6
1952	449.1	454.0	662.7	629.5	1342.1	1772.1	831.4	438.8	539.7	414.7	384.3	330.4	8161.0
1953	403.5	554.8	416.8	322.4	447.2	1727.2	831.3	338.6	251.1	374.5	395.2	397.1	6258.1
1954	246.2	327.7	307.7	349.2	904.4	1078.1	961.9	580.1	247.6	390.4	418.8	367.2	5939.5
1955	255.8	271.8	278.5	525.1	842.7	1315.7	594.6	175.4	182.1	380.5	355.6	395.5	5574.0
1956	320.1	304.7	552.2	521.7	1200.0	2112.3	713.9	350.7	310.7	375.8	427.4	523.5	7513.2
1957	519.5	561.5	466.5	581.5	1189.7	2705.8	1425.7	409.2	475.7	502.5	494.6	423.2	9315.1
1958	416.6	597.6	452.1	542.7	984.2	1370.5	555.5	230.5	233.9	348.2	372.1	314.4	6032.0
1959	338.0	331.0	747.7	341.5	577.4	1866.2	861.9	262.2	275.5	473.4	416.6	440.6	6976.1
1960	245.9	291.1	475.5	379.2	455.2	1147.9	169.1	139.8	190.4	325.5	370.0	270.8	4456.5
1961	265.5	276.2	255.0	135.8	536.7	1127.1	127.1	30.1	384.0	540.2	518.2	338.5	4337.6
1962	294.2	434.4	464.5	521.5	929.7	1980.3	1165.1	478.8	444.0	500.4	434.7	388.3	8036.1
1963	378.5	549.4	468.5	397.7	990.5	2091.0	771.2	278.2	595.2	397.2	422.5	331.5	7468.1
1964	395.0	408.1	579.2	455.4	922.2	2104.5	1585.8	428.8	393.2	407.7	421.1	378.4	8237.3
1965	504.2	484.5	524.3	847.8	1033.7	2348.3	2005.6	723.6	655.2	665.3	429.8	409.2	10629.6
1966	572.5	572.7	544.2	366.5	696.3	1001.1	382.5	135.7	196.6	332.7	386.5	389.7	5134.9
1967	381.0	322.5	353.5	409.5	784.7	2367.3	2581.2	568.4	422.2	527.3	508.9	489.6	9476.0
1968	618.5	861.9	657.2	429.2	826.5	2525.1	1307.2	649.7	643.6	620.1	541.1	432.2	9510.3
1969	519.5	478.0	630.4	560.1	1067.3	1541.9	1144.9	425.0	339.3	456.6	424.9	453.0	8041.7
1970	491.4	484.1	415.1	329.5	1175.5	2519.0	1414.0	427.0	424.7	512.7	490.3	443.0	8914.3
1971	547.2	951.5	820.0	839.4	1212.9	2377.7	1482.5	592.4	547.6	727.9	585.3	494.7	11178.2
1972	497.5	545.6	1101.9	644.2	974.3	2024.3	986.7	548.4	527.9	653.8	627.4	390.5	9527.9
1973	523.7	527.6	529.4	517.1	1142.5	1531.1	707.5	420.6	522.3	597.4	675.3	517.2	8211.8
1974	525.5	512.2	561.2	634.9	839.1	2550.1	1657.0	575.6	475.5	524.7	584.9	464.6	9903.2
1975	545.4	482.8	691.9	607.5	1535.9	2103.2	2599.7	788.9	427.7	2.1	4.8	2.8	9592.7
AVERAGE	393.5	420.1	534.0	483.1	890.0	1815.5	1096.5	405.4	387.3	480.8	449.3	378.0	7762.8
MEDIAN	395.5	484.2	539.4	474.4	922.2	1737.2	988.7	402.7	395.2	475.4	438.6	389.7	8036.1
80 PERCENTILE	242.5	304.7	379.2	342.7	626.5	1239.9	555.5	230.5	247.6	380.5	385.5	320.1	5784.1
50 PERCENTILE	381.0	461.5	469.5	409.5	795.2	1531.1	831.5	340.1	339.3	445.0	427.4	378.4	7468.1
20 PERCENTILE	491.4	484.5	662.7	550.1	1067.9	2348.3	1482.5	568.4	481.4	597.4	518.2	443.5	9315.1
MAXIMUM	618.5	951.5	1101.9	863.3	1342.1	2705.8	2581.2	779.4	662.3	727.9	675.3	517.2	11178.2
MINIMUM	174.6	236.5	255.0	135.8	536.7	1001.1	127.1	30.1	136.2	325.5	299.4	270.8	4312.8

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL
WITHOUT CWD AND HARDIN PROJECT
POWDER RIVER AT ARVADA

76/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	8.4	4.0	29.1	10.3	15.4	14.8	0.0	0.0	0.0	5.0	5.3	7.2	99.5
1940	4.3	8.7	17.8	19.4	7.6	14.6	0.0	0.0	0.0	25.6	4.8	6.0	109.0
1941	5.9	5.6	10.3	54.6	75.4	16.5	39.7	44.1	9.2	17.0	14.1	11.8	315.4
1942	5.5	6.7	15.7	29.9	36.4	9.8	0.0	0.0	0.0	6.5	8.3	5.8	127.0
1943	7.2	8.9	34.3	41.4	32.0	49.7	.7	0.0	0.0	3.3	5.9	4.5	191.8
1944	3.1	5.3	8.5	35.2	91.2	85.0	13.8	0.0	0.0	6.6	7.9	7.1	260.6
1945	6.6	6.4	31.2	35.2	29.7	56.5	14.4	2.3	2.3	9.6	11.2	6.3	216.6
1946	9.6	12.0	15.2	23.3	21.2	28.0	11.6	0.0	5.0	9.0	10.2	7.8	155.9
1947	6.0	9.7	57.1	19.6	78.4	35.0	10.1	0.0	0.0	5.4	9.3	6.8	239.3
1948	5.5	12.5	51.8	15.7	24.7	64.9	13.8	0.0	0.0	8.1	8.3	5.4	213.4
1949	4.1	3.8	52.9	19.5	26.0	31.8	0.0	0.0	0.0	5.7	6.0	1.6	150.2
1950	2.2	3.0	12.4	21.4	46.1	11.6	0.0	0.0	0.0	6.3	7.2	2.6	112.8
1951	4.3	4.4	13.5	8.7	11.0	0.0	0.0	0.0	13.5	7.3	6.9	4.8	74.3
1952	2.5	5.4	14.0	21.2	66.0	7.6	.4	0.0	0.0	1.7	4.5	3.1	126.4
1953	5.5	6.2	17.2	9.3	2.2	29.6	0.0	4.8	0.0	.4	3.5	3.6	82.0
1954	3.9	11.5	15.1	15.0	8.5	0.0	0.0	0.0	0.0	.6	4.1	2.3	58.9
1955	2.7	3.2	45.1	29.7	23.1	36.1	0.0	3.0	0.0	1.7	3.0	12.7	158.2
1956	6.5	6.4	35.4	14.2	14.3	8.5	0.0	0.0	0.0	.4	2.8	4.6	94.1
1957	4.0	1.9	12.9	13.0	22.6	58.1	4.4	0.0	0.0	6.2	8.5	7.0	138.5
1958	5.7	4.6	11.7	15.2	22.9	15.2	16.1	0.0	0.0	1.4	5.5	4.3	104.5
1959	4.2	3.5	21.0	10.0	22.8	17.4	2.0	0.0	0.0	2.4	2.9	4.4	90.5
1960	3.5	3.0	36.2	15.7	.9	0.0	0.0	0.0	0.0	.4	2.3	2.0	63.7
1961	2.7	2.9	7.9	5.0	8.8	0.0	0.0	0.0	0.0	9.8	6.5	2.6	46.1
1962	2.4	25.5	14.7	24.1	118.5	190.9	39.3	6.0	6.9	23.6	10.8	9.0	471.4
1963	7.7	14.7	13.5	13.6	28.2	47.9	1.0	0.0	6.2	4.2	7.1	5.1	149.0
1964	5.9	4.5	12.5	27.2	35.2	97.1	10.3	0.0	0.0	2.8	7.0	6.2	206.2
1965	9.2	13.3	28.8	40.3	41.4	59.3	19.0	.9	.8	8.8	8.3	5.4	235.4
1966	4.9	5.5	20.5	15.9	12.2	1.1	0.0	0.0	2.5	3.1	6.6	4.0	76.3
1967	5.0	6.4	12.5	10.5	25.0	155.1	38.2	0.0	2.9	8.6	9.6	5.0	278.8
1968	5.0	7.5	21.3	13.5	39.2	121.8	11.2	3.6	6.8	10.6	9.1	7.3	256.8
1969	9.1	7.0	18.7	14.9	12.9	10.1	.7	0.0	0.0	3.4	7.0	4.8	88.5
1970	6.1	9.1	16.3	12.5	62.2	44.5	2.6	0.0	0.0	5.3	8.3	6.8	173.6
1971	4.5	6.8	35.5	16.6	48.3	49.5	0.0	0.0	0.0	7.2	9.5	6.5	187.5
1972	5.6	32.4	38.0	20.6	43.4	32.4	0.0	3.3	1.4	9.8	9.3	5.0	201.6
1973	5.4	7.5	20.0	39.4	74.1	22.3	16.3	0.0	14.9	13.7	18.6	18.2	250.9
1974	15.3	11.9	16.9	39.5	17.1	3.1	0.0	0.0	0.0	6.1	8.8	6.2	124.9
1975	5.2	5.1	16.0	21.1	36.6	96.9	20.1	0.0	0.0	.4	.6	.4	202.3
AVERAGE	5.5	6.1	23.2	21.6	34.6	41.5	7.8	1.8	2.0	6.7	7.3	5.8	165.7
MEDIAN	5.3	6.7	17.8	16.6	25.0	28.0	.7	0.0	0.0	6.1	7.1	5.4	149.0
80 PERCENTILE	3.3	5.6	12.5	12.5	12.2	7.6	0.0	0.0	0.0	1.7	4.5	3.6	88.5
60 PERCENTILE	4.8	5.5	15.7	14.9	22.8	15.2	0.0	0.0	0.0	5.0	6.6	4.8	124.9
40 PERCENTILE	5.7	7.5	20.5	20.4	32.0	36.1	2.6	0.0	0.0	8.6	8.3	6.2	173.6
20 PERCENTILE	6.5	11.5	36.3	29.9	48.3	58.1	15.8	.9	2.9	9.6	9.3	7.1	235.4
MAXIMUM	15.3	32.4	57.1	68.6	118.5	190.9	39.7	44.1	14.9	25.6	18.6	18.2	471.4
MINIMUM	2.2	1.9	7.9	5.0	.9	0.0	0.0	0.0	0.0	.4	2.3	1.6	46.1

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
POWDER RIVER AT LOCATE

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	5.1	.4	121.3	15.8	15.0	56.3	0.0	0.0	0.0	0.0	.1	1.7	200.7
1940	0.0	0.0	25.4	20.9	.4	20.4	4.3	0.0	0.0	51.8	4.2	9.0	139.9
1941	4.2	6.7	17.5	58.4	150.4	53.6	15.6	43.7	39.5	34.5	18.0	21.8	463.7
1942	2.3	7.2	59.3	40.1	61.7	57.8	0.0	0.0	0.0	4.8	4.5	6.1	240.9
1943	7.9	204.5	148.1	64.9	34.5	130.4	14.7	0.0	0.0	0.0	4.9	2.5	621.5
1944	.3	0.0	227.3	124.5	165.0	455.6	65.6	0.0	0.0	1.7	6.5	4.5	1049.2
1945	2.6	11.3	56.3	34.3	27.4	131.1	29.4	3.0	2.3	10.9	10.1	5.9	325.7
1946	12.7	16.4	55.5	36.6	50.4	81.9	53.5	0.0	11.9	37.6	15.5	16.4	371.0
1947	11.5	35.9	194.1	62.4	117.0	94.6	26.7	0.0	0.0	2.7	6.1	6.2	585.6
1948	2.7	98.5	202.4	30.1	40.7	110.3	51.6	.6	0.0	7.9	12.6	1.5	558.8
1949	.7	0.0	224.4	46.3	42.1	65.6	0.0	0.0	0.0	4.1	9.5	0.0	385.1
1950	0.0	0.0	0.0	64.3	64.4	37.4	0.0	0.0	0.0	6.1	3.6	4.1	179.9
1951	1.4	2.3	21.3	17.8	5.1	0.0	0.0	3.2	23.6	11.3	15.7	19.7	121.9
1952	1.4	6.1	99.1	105.4	74.4	28.5	0.0	0.0	0.0	0.0	2.3	2.3	319.4
1953	3.8	7.1	27.3	11.6	6.3	92.9	0.0	5.4	0.0	0.0	.6	3.9	159.0
1954	3.6	15.8	20.5	6.5	6.5	0.0	0.0	0.0	1.8	0.0	0.0	1.4	56.0
1955	.3	0.0	28.6	81.0	30.6	43.9	3.4	0.0	0.0	0.0	0.0	.8	188.6
1956	3.6	1.1	69.2	22.6	28.2	24.8	0.0	0.0	0.0	0.0	.2	3.2	148.9
1957	1.6	.4	19.9	15.1	3.5	118.1	10.4	0.0	0.0	2.9	7.6	3.8	180.2
1958	5.9	6.4	13.5	17.1	27.6	35.9	29.4	0.0	0.0	0.0	1.3	4.9	141.9
1959	2.6	2.9	157.3	21.3	15.5	16.8	0.0	0.0	0.0	0.0	2.8	6.3	227.7
1960	2.3	4.6	121.2	21.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	150.1
1961	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.5	0.0	15.2
1962	0.0	72.4	47.1	38.6	117.5	246.3	96.0	3.0	0.0	23.7	12.6	5.9	659.4
1963	3.9	54.5	39.4	20.1	44.1	175.2	23.4	0.0	.5	2.7	7.6	1.8	377.9
1964	3.6	3.0	23.9	27.3	25.2	172.2	42.0	0.0	0.0	0.0	.9	1.8	299.8
1965	6.5	11.4	10.4	175.4	48.7	91.7	20.7	0.0	0.0	11.3	9.4	5.8	389.3
1966	4.3	5.7	23.4	19.4	4.8	0.0	0.0	0.0	0.0	0.0	1.1	1.6	60.2
1967	2.1	6.7	27.4	17.0	53.5	279.6	81.2	0.0	10.7	10.6	12.4	3.0	504.1
1968	2.7	22.0	115.6	25.6	34.7	201.4	18.4	17.6	17.3	12.9	14.9	4.2	487.3
1969	7.5	5.5	131.4	68.7	44.6	12.1	23.7	0.0	0.0	0.0	7.5	1.9	302.8
1970	5.4	10.5	50.3	27.4	94.5	114.6	1.0	0.0	0.0	1.3	9.4	5.2	315.5
1971	1.6	104.9	172.8	64.8	55.9	138.6	0.0	0.0	0.0	49.2	18.2	2.2	612.1
1972	4.1	74.6	279.2	37.1	45.5	74.1	6.6	.2	5.7	15.5	17.8	2.8	563.1
1973	7.3	9.8	32.7	36.9	102.4	83.2	5.1	0.0	26.2	16.1	14.9	4.5	339.3
1974	24.4	28.6	40.8	49.9	43.5	23.5	0.0	0.0	0.0	11.1	15.2	8.5	245.4
1975	7.2	9.3	54.6	45.9	106.3	154.6	72.7	0.0	0.0	0.0	0.0	0.0	450.8
AVERAGE	4.4	25.2	80.2	42.3	45.3	91.7	18.3	2.1	3.8	9.0	7.3	4.6	335.1
MEDIAN	2.3	6.7	47.1	30.1	40.7	83.8	3.4	0.0	0.0	2.7	6.5	3.2	302.8
80 PERCENTILE	.7	.4	20.5	17.8	6.3	18.8	0.0	0.0	0.0	0.0	.9	1.6	148.9
60 PERCENTILE	2.8	4.3	26.8	22.6	27.4	38.3	0.0	0.0	0.0	1.3	4.2	2.5	227.7
40 PERCENTILE	5.5	9.3	58.3	37.1	44.6	84.8	14.7	0.0	0.0	6.1	9.4	4.1	339.3
20 PERCENTILE	7.9	24.5	148.1	64.5	64.4	131.1	29.4	.2	2.3	12.9	14.9	6.1	504.1
MAXIMUM	24.4	204.5	279.2	175.4	165.0	455.6	96.0	43.7	39.5	51.8	18.2	21.8	1049.2
MINIMUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.2

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 REVISED DEVELOPMENT LEVEL
WITH SRD AND HARDIN PROJECT
YELLOWSTONE RIVER AT SIDNEY

74/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1937	374.1	274.4	729.2	405.2	791.7	1140.5	388.6	119.7	87.2	327.5	348.2	387.2	5498.8
1938	195.4	261.4	504.5	328.0	595.1	1280.5	149.8	0.0	47.4	537.8	294.4	299.4	4276.0
1939	215.4	284.5	362.1	585.6	684.2	1124.8	312.4	280.5	752.4	806.5	551.2	472.6	6202.6
1940	460.1	491.2	685.5	542.3	985.2	1623.6	915.8	291.5	257.2	875.1	492.5	342.1	7915.6
1941	484.4	567.8	1221.7	1035.5	950.3	2605.6	2295.1	629.0	405.4	850.1	483.8	423.1	11770.6
1942	413.5	397.0	1050.4	765.5	870.1	3120.1	1546.8	351.5	321.6	460.2	452.3	320.0	10952.5
1943	421.4	441.5	754.4	590.6	501.4	1681.5	1633.1	477.0	384.6	582.7	512.4	352.8	8093.7
1944	507.5	420.3	883.4	451.7	648.0	1415.6	642.3	360.3	388.3	833.4	536.9	413.5	6865.4
1947	366.0	414.0	1174.3	759.3	1336.9	1688.3	1420.8	435.4	358.6	587.8	547.9	464.0	9560.2
1948	458.5	450.7	780.9	578.5	684.7	2635.1	1140.7	339.0	178.2	429.8	462.7	259.0	8583.7
1949	298.4	343.5	542.1	585.9	828.7	1474.0	541.5	155.2	237.6	427.8	437.1	285.0	6290.0
1950	298.6	345.4	703.5	663.4	570.9	1698.2	1296.0	536.4	404.0	608.9	498.6	486.2	8359.9
1951	471.1	466.7	652.3	650.5	711.2	1331.4	1242.4	689.3	527.6	591.1	577.5	549.4	8510.7
1952	465.0	550.6	750.5	1354.3	1304.9	1788.3	713.9	342.1	258.1	377.2	377.3	329.2	8614.8
1953	395.4	372.6	440.5	306.4	418.4	1635.6	740.5	250.6	166.9	349.8	390.5	376.9	6043.8
1954	193.8	419.5	534.5	484.7	838.6	985.7	907.8	298.0	211.9	379.7	427.3	376.4	5797.6
1955	227.4	272.9	300.5	664.9	641.9	1260.0	581.1	91.2	92.1	372.6	355.9	363.1	5226.4
1956	339.2	292.1	715.2	572.4	1024.4	2130.7	643.2	276.0	256.0	358.9	442.6	344.8	7395.6
1957	346.9	343.2	565.9	570.1	1020.6	2705.6	1348.6	316.2	382.2	481.4	494.9	417.3	8992.8
1958	406.9	387.8	554.5	389.2	808.4	1336.9	543.8	120.6	156.8	366.4	376.3	301.5	5708.7
1959	326.3	327.5	1200.4	426.9	511.9	1727.1	829.0	150.7	195.1	465.2	387.8	437.0	6984.9
1960	238.2	327.5	784.9	421.8	594.9	1083.4	68.2	33.1	103.9	306.7	367.7	248.8	4334.3
1961	284.8	280.0	317.4	136.2	187.6	1098.9	21.7	0.0	316.6	542.2	505.5	315.7	4006.6
1962	317.7	530.9	574.7	585.0	1038.4	2291.6	1417.2	427.2	383.1	536.4	469.0	416.0	8987.1
1963	388.2	664.3	535.3	426.7	1093.3	2551.7	819.4	199.7	346.8	402.6	443.5	320.8	8291.2
1964	425.5	445.7	435.4	493.9	893.9	2295.1	1674.8	392.5	380.9	410.8	434.0	337.5	8619.9
1965	502.0	490.3	584.6	1260.1	1102.0	2638.1	2393.4	685.6	571.9	692.5	446.8	439.9	11807.1
1966	422.2	417.5	685.9	360.6	566.5	917.0	262.5	60.1	126.4	355.1	400.5	422.0	4996.2
1967	334.7	535.7	416.5	486.6	816.2	2571.6	2518.8	512.5	399.2	573.3	539.6	482.0	9988.9
1968	665.5	830.2	903.0	443.1	567.2	2433.1	1272.5	581.6	647.5	647.0	603.3	482.3	9896.2
1969	545.5	504.9	1119.0	693.8	979.9	1276.9	1198.1	326.4	264.3	463.2	456.0	475.5	8303.4
1970	503.9	545.7	554.5	391.0	1173.2	2417.0	1355.0	352.6	359.6	515.3	500.2	496.2	9164.1
1971	591.4	1037.1	1181.1	933.8	1174.5	2612.2	1513.9	510.5	519.6	874.2	625.9	460.2	12034.4
1972	506.8	530.1	1617.5	680.2	978.6	2095.6	922.3	463.1	474.9	673.8	663.4	431.1	10141.5
1973	569.1	563.6	662.0	596.1	1191.1	1681.8	637.5	328.4	543.2	645.0	658.7	524.2	8600.6
1974	535.2	536.3	597.5	680.3	811.6	2483.8	1665.6	495.9	441.0	584.6	618.5	502.1	9932.9
1975	554.8	436.9	813.2	721.3	1508.8	2250.8	2741.4	742.8	435.7	5.3	9.4	6.6	10226.9
AVERAGE	404.0	452.1	722.8	589.8	847.2	1875.9	1090.9	335.7	335.3	493.3	464.0	380.5	7991.3
MEDIAN	404.9	417.5	683.4	542.3	828.7	1727.1	915.8	326.4	346.8	475.1	462.7	376.9	8303.4
80 PERCENTILE	298.6	327.5	435.4	390.8	567.2	1280.0	541.5	120.6	166.9	372.6	387.8	315.7	5708.7
60 PERCENTILE	368.0	395.4	597.6	483.1	791.7	1681.5	740.5	280.5	258.1	450.1	443.5	349.4	7395.6
40 PERCENTILE	422.2	450.7	715.2	583.9	893.9	2095.6	1272.5	351.5	382.2	537.4	494.9	422.0	8600.6
20 PERCENTILE	503.9	545.7	903.0	693.8	1038.4	2551.7	1513.9	495.9	441.0	604.9	547.9	472.6	9896.2
MAXIMUM	665.5	1037.1	1617.5	1359.3	1535.9	3120.1	2518.8	684.3	752.4	874.2	663.4	524.2	12034.4
MINIMUM	193.8	244.5	483.5	136.2	187.6	917.0	21.7	0.0	47.4	306.7	294.4	248.8	4006.6

WATER QUALITY

1975

Development Level

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 DEVELOPMENT LEVEL

78/02/16.

WATER QUALITY OF GREYBULL RIVER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	540.9	554.8	565.0	575.2	573.7	566.7	543.6	563.3	565.4	567.7	565.4	565.1	0.0
1940	564.6	561.9	570.2	575.2	582.7	575.9	562.5	563.3	565.4	573.3	565.4	565.1	0.0
1941	572.6	572.3	572.6	581.6	582.2	575.3	562.5	563.3	565.4	540.8	523.2	524.7	0.0
1942	526.0	553.4	571.7	575.2	574.4	567.4	513.5	563.3	565.4	573.3	565.4	565.1	0.0
1943	573.0	565.1	564.9	575.2	492.4	482.6	407.6	563.3	565.4	559.8	542.9	543.7	0.0
1944	565.0	553.5	572.6	580.6	586.0	579.2	531.4	563.3	565.4	573.3	565.4	565.1	0.0
1945	573.4	572.3	572.6	581.8	586.8	586.8	469.2	563.3	565.4	561.6	544.7	545.1	0.0
1946	547.1	552.3	568.3	575.2	570.8	563.6	555.8	563.3	565.4	571.2	565.4	565.1	0.0
1947	572.7	565.9	572.6	575.2	559.5	551.9	478.3	563.3	565.4	560.1	543.1	544.0	0.0
1948	565.2	561.2	572.3	575.2	571.5	522.9	562.5	563.3	565.4	573.3	565.4	565.1	0.0
1949	572.6	572.3	572.6	576.1	553.6	565.6	562.5	563.3	565.4	573.3	565.4	565.1	0.0
1950	572.6	572.3	572.6	576.6	574.3	567.1	463.4	563.3	565.4	553.4	536.2	537.3	0.0
1951	538.5	548.6	570.9	575.2	538.6	530.3	431.9	563.3	565.4	562.9	535.7	536.8	0.0
1952	538.0	553.0	572.6	575.2	534.3	525.9	558.2	563.3	565.4	573.0	565.4	565.1	0.0
1953	572.5	562.0	570.5	575.2	584.2	577.3	528.3	563.3	565.4	573.3	565.4	565.1	0.0
1954	572.2	563.0	572.6	575.2	564.5	557.1	514.3	563.3	565.4	573.3	565.4	565.1	0.0
1955	572.6	572.3	572.6	584.0	586.8	586.8	562.5	563.3	565.4	573.3	565.4	565.1	0.0
1956	571.5	572.3	566.9	575.2	477.8	467.4	535.0	563.3	565.4	571.6	565.4	565.1	0.0
1957	573.5	557.3	572.6	576.3	509.9	500.5	498.5	563.3	565.4	564.8	565.4	565.1	0.0
1958	556.1	553.1	572.6	57[illegible]	548.9	540.9	562.5	563.3	565.4	573.3	565.4	565.1	0.0
1959	572.6	572.3	572.6	58[illegible]	562.3	554.6	549.7	563.3	565.4	569.6	565.4	565.1	0.0
1960	570.3	558.0	562.9	575.2	586.8	586.8	562.5	563.3	565.4	573.3	565.4	565.1	0.0
1961	572.6	572.3	572.6	584.0	586.8	586.8	562.5	563.3	565.4	572.0	565.4	565.1	0.0
1962	570.3	556.1	570.1	575.2	538.3	529.9	520.4	563.3	565.4	567.1	565.4	565.1	0.0
1963	563.1	548.4	571.5	575.2	525.0	516.1	541.2	563.3	565.4	571.3	565.4	565.1	0.0
1964	570.3	556.3	571.8	576.3	568.1	560.8	460.7	563.3	565.4	570.4	565.4	565.1	0.0
1965	568.7	555.2	569.9	575.2	509.4	500.1	427.8	563.3	565.4	551.1	533.9	535.0	0.0
1966	536.2	552.8	564.2	575.2	586.8	586.8	562.5	563.3	565.4	573.2	565.4	565.1	0.0
1967	570.6	563.8	570.1	579.8	519.9	510.9	451.4	563.3	565.4	560.1	565.4	565.1	0.0
1968	559.8	549.8	568.1	591.5	584.3	577.4	531.3	563.3	565.4	558.0	541.0	541.9	0.0
1969	543.2	550.0	568.9	575.2	566.8	559.5	560.9	563.3	565.4	570.4	565.4	565.1	0.0
1970	570.4	553.4	571.0	582.0	514.3	505.1	516.1	563.3	565.4	565.4	565.4	565.1	0.0
1971	557.8	550.5	571.2	575.2	495.6	485.7	457.8	563.3	565.4	557.4	540.4	541.3	0.0
1972	542.5	562.8	563.8	575.2	586.8	586.8	562.5	563.3	565.4	566.0	565.4	565.1	0.0
1973	559.6	549.7	559.9	575.2	536.8	528.4	539.5	563.3	565.4	557.2	540.2	541.1	0.0
1974	542.3	550.7	568.9	575.2	476.1	465.6	483.9	563.3	565.4	565.8	565.4	565.1	0.0
1975	558.9	555.6	565.7	579.0	586.9	586.8	380.8	563.3	565.4	573.3	565.4	565.1	0.0
AVERAGE	560.3	558.6	569.8	577.2	552.5	545.9	515.6	563.3	565.4	566.6	563.5	563.4	0.0
MEDIAN	568.7	555.2	571.0	575.2	562.3	554.6	531.4	563.3	565.4	569.6	565.4	565.1	0.0
80 PERCENTILE	542.5	550.7	566.9	575.2	514.3	505.1	463.4	563.3	565.4	558.0	541.0	541.9	0.0
60 PERCENTILE	559.6	554.4	570.1	575.2	538.6	530.3	516.1	563.3	565.4	566.0	565.4	565.1	0.0
40 PERCENTILE	570.4	557.3	571.8	575.2	570.8	563.6	543.6	563.3	565.4	571.3	565.4	565.1	0.0
20 PERCENTILE	572.6	572.3	572.6	580.6	584.3	577.4	562.5	563.3	565.4	573.3	565.4	565.1	0.0
MAXIMUM	573.5	572.3	572.6	584.0	586.8	586.8	562.5	563.3	565.4	573.3	565.4	565.1	0.0
MINIMUM	526.0	548.4	559.9	575.2	476.1	465.6	407.6	563.3	565.4	540.8	523.2	524.7	0.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 DEVELOPMENT LEVEL

78/02/16.

WATER QUALITY OF SHOSHONE RIVER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	619.4	624.6	582.6	620.9	647.4	645.5	661.0	661.0	661.0	659.6	656.1	622.8	0.0
1940	634.4	628.9	624.2	640.6	560.9	628.6	652.8	661.0	653.3	634.4	615.2	612.6	0.0
1941	630.3	632.6	620.8	582.8	582.4	400.0	552.7	400.0	400.0	453.9	537.1	601.7	0.0
1942	629.7	614.4	591.5	537.1	400.0	400.0	577.2	646.0	634.2	618.1	604.0	620.1	0.0
1943	618.1	610.0	556.7	472.3	584.5	400.0	400.0	616.8	637.8	633.1	596.2	606.5	0.0
1944	618.1	615.1	607.8	567.3	400.0	400.0	458.6	645.3	654.0	631.7	607.5	618.8	0.0
1945	616.7	616.6	583.3	599.0	618.1	400.0	400.0	579.9	596.9	607.2	590.6	599.0	0.0
1946	605.1	610.0	586.7	571.6	639.2	584.1	616.7	646.7	565.9	562.9	582.8	614.0	0.0
1947	635.8	623.8	605.8	565.2	510.4	400.0	400.0	617.4	634.2	613.3	581.4	611.3	0.0
1948	618.8	617.3	576.5	527.9	565.6	400.0	557.4	639.2	635.6	621.5	602.6	611.9	0.0
1949	620.1	625.3	577.9	583.5	635.1	446.2	628.3	654.2	655.4	628.3	606.1	629.0	0.0
1950	631.7	615.8	613.3	616.6	639.2	620.9	620.8	623.5	612.4	597.6	590.6	599.0	0.0
1951	621.5	623.1	615.3	608.2	625.6	442.0	400.0	576.5	630.0	584.7	597.6	617.4	0.0
1952	622.2	617.3	601.7	420.2	400.0	400.0	590.8	620.8	653.3	649.4	615.2	618.8	0.0
1953	612.6	621.7	607.8	627.2	646.7	481.4	656.2	655.5	658.2	639.9	625.1	618.1	0.0
1954	626.2	621.7	623.5	607.5	642.6	630.0	649.4	661.0	658.9	652.1	650.4	629.0	0.0
1955	632.4	628.9	626.2	615.9	660.3	652.5	659.6	661.0	659.6	656.9	630.0	618.1	0.0
1956	629.7	629.7	611.3	648.3	647.4	610.3	652.1	654.2	652.5	646.0	621.6	623.5	0.0
1957	626.9	623.8	620.1	633.5	457.3	400.0	400.0	637.2	635.6	627.6	588.5	602.4	0.0
1958	619.4	622.4	622.8	596.9	400.0	486.4	594.9	639.9	650.4	649.4	613.8	615.3	0.0
1959	622.8	621.7	610.6	613.1	637.8	623.7	647.4	658.3	657.[illegible]	631.7	622.3	623.5	0.0
1960	626.2	632.6	607.2	636.4	661.0	659.6	661.0	661.0	658.[illegible]	653.5	632.8	638.5	0.0
1961	639.9	633.3	612.6	659.6	661.0	592.7	651.5	658.3	597.6	614.0	594.8	624.2	0.0
1962	626.9	561.9	584.7	533.5	631.7	400.0	573.8	618.8	642.0	650.8	618.0	612.6	0.0
1963	639.9	599.1	583.3	623.0	607.2	400.0	609.2	655.5	652.1	646.0	610.3	621.5	0.0
1964	617.4	621.7	613.3	605.4	567.6	400.0	400.0	648.1	651.8	652.8	637.1	642.6	0.0
1965	640.6	642.8	629.7	575.1	596.9	400.0	400.0	594.2	563.8	583.3	592.0	603.1	0.0
1966	612.6	621.7	618.1	642.7	661.0	655.4	658.3	656.2	647.6	648.1	609.6	622.8	0.0
1967	632.4	631.1	611.3	641.3	623.5	400.0	400.0	639.9	638.5	639.9	600.4	621.5	0.0
1968	624.9	601.3	608.5	627.9	650.1	489.9	648.1	595.6	629.3	634.4	619.5	618.8	0.0
1969	618.1	618.8	613.3	584.2	640.6	480.7	592.2	654.2	645.5	652.4	607.5	618.1	0.0
1970	635.1	625.3	616.0	627.2	602.4	454.7	625.6	656.2	644.8	638.5	609.6	617.4	0.0
1971	624.2	620.9	618.1	617.3	595.6	400.0	613.3	644.6	642.7	576.5	597.6	639.2	0.0
1972	631.7	606.4	582.6	615.2	639.2	400.0	647.4	630.3	649.0	626.9	601.8	619.4	0.0
1973	628.3	619.5	573.8	602.6	471.4	576.5	609.2	646.7	528.6	661.0	661.0	661.0	0.0
1974	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
1975	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
AVERAGE	627.4	621.7	607.1	599.2	587.9	498.5	572.6	633.5	629.5	626.5	612.1	621.5	0.0
MEDIAN	626.2	621.7	610.6	608.2	623.5	446.2	609.2	646.0	642.7	633.1	607.5	618.8	0.0
80 PERCENTILE	618.1	614.4	583.3	567.3	510.4	400.0	400.0	618.8	612.4	607.2	592.0	611.3	0.0
60 PERCENTILE	622.2	619.5	607.2	599.0	596.9	400.0	590.8	639.9	635.6	628.3	602.6	617.4	0.0
40 PERCENTILE	628.3	623.1	613.3	616.6	637.8	486.4	625.6	654.2	649.0	639.9	613.8	620.1	0.0
20 PERCENTILE	632.4	628.9	620.1	633.5	647.4	623.7	652.1	658.3	655.4	650.8	625.1	624.2	0.0
MAXIMUM	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
MINIMUM	605.1	561.9	556.7	420.2	400.0	400.0	400.0	400.0	400.0	453.9	537.1	599.0	0.0

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STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 WITHOUT DEVELOPMENT LEVEL

78/02/17.

WATER QUALITY-YELLOWSTONE-MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	597.6	564.3	497.4	563.1	353.9	214.3	288.3	460.3	556.5	529.4	575.7	604.8	470.7
1940	673.0	586.1	551.9	574.8	376.1	216.1	307.3	593.8	573.1	498.3	595.1	609.9	495.0
1941	645.9	573.4	552.3	580.0	379.2	207.8	298.7	412.5	361.6	374.2	442.2	485.9	452.4
1942	512.4	479.5	439.7	518.9	308.1	236.5	257.3	396.1	494.0	483.0	497.8	538.3	404.4
1943	539.4	438.6	394.9	448.9	309.4	266.1	228.7	324.7	436.8	472.8	479.5	522.8	352.6
1944	533.0	509.5	482.1	539.0	342.1	269.3	241.6	381.8	467.6	486.5	498.6	544.5	385.4
1945	535.3	504.2	445.3	580.5	400.7	233.7	239.1	345.7	448.6	432.0	462.3	543.0	402.5
1946	506.5	483.3	467.6	545.0	346.6	223.1	275.5	413.2	450.4	441.5	478.9	544.1	427.7
1947	572.9	528.6	456.1	498.5	246.5	235.6	242.9	355.2	450.8	429.5	458.8	497.2	384.6
1948	515.5	486.8	438.5	536.8	294.8	262.1	256.4	380.1	515.4	498.4	495.9	614.8	394.3
1949	599.7	525.5	445.8	538.1	312.7	295.7	274.8	430.0	488.1	484.5	494.5	599.2	432.4
1950	582.8	511.5	428.6	526.3	385.8	233.0	240.5	326.6	430.1	404.0	442.8	469.6	390.9
1951	516.3	477.8	431.6	536.2	320.9	224.4	243.3	299.9	404.4	417.5	440.1	498.2	384.5
1952	519.3	480.4	436.3	487.9	231.0	236.4	265.3	371.1	486.3	507.3	529.6	577.0	399.2
1953	534.6	514.3	509.4	583.4	419.8	233.4	267.4	402.5	526.5	544.1	536.1	586.0	447.5
1954	572.8	496.7	526.5	576.9	331.4	208.5	263.0	397.7	526.0	537.1	542.4	544.0	450.6
1955	586.2	532.7	556.9	535.2	384.1	217.3	278.6	448.2	552.1	540.0	579.0	578.4	467.6
1956	541.2	506.5	448.5	519.8	257.6	253.0	267.6	392.1	493.8	526.7	497.9	566.9	401.8
1957	575.1	512.6	491.4	520.6	269.4	272.3	244.1	378.6	433.0	462.4	468.6	514.0	376.9
1958	531.6	498.4	496.2	578.0	315.5	219.8	282.5	430.4	521.6	535.0	533.0	568.0	447.6
1959	559.8	520.3	413.6	565.1	394.5	238.5	265.4	422.7	510.8	487.5	519.4	539.3	427.3
1960	573.9	510.7	468.7	569.2	421.3	210.7	307.7	475.9	548.6	566.8	541.3	613.8	487.2
1961	606.7	547.3	588.6	634.1	441.0	210.9	325.7	558.6	474.2	451.8	462.8	577.3	501.0
1962	549.9	489.3	495.2	520.7	315.2	245.7	251.7	360.3	444.7	463.7	499.6	537.7	399.1
1963	544.7	492.8	489.6	557.2	309.1	288.6	266.6	420.6	463.5	516.6	506.5	575.6	411.8
1964	537.3	494.4	523.6	542.3	322.0	249.2	241.1	370.8	463.6	510.7	507.3	544.5	396.2
1965	499.0	471.0	472.4	492.8	300.3	258.5	231.0	309.5	373.2	396.7	499.8	520.7	355.6
1966	552.3	511.2	469.6	571.8	372.1	205.5	295.6	478.5	544.0	556.6	526.9	535.6	473.9
1967	565.7	527.8	539.6	549.6	345.3	240.1	224.0	339.2	452.7	451.7	462.2	470.3	373.3
1968	468.0	427.1	435.6	550.7	380.7	257.2	247.4	321.2	376.5	413.1	446.0	506.2	373.5
1969	496.0	474.4	399.5	523.3	299.3	218.7	252.4	370.3	480.0	479.3	499.1	487.5	401.2
1970	501.6	469.8	505.0	572.6	271.8	257.7	244.5	373.1	451.7	458.2	475.9	501.3	383.3
1971	486.7	376.9	400.5	454.8	265.6	259.7	242.8	334.6	407.4	376.4	427.4	464.5	347.8
1972	502.5	456.2	353.4	499.8	314.0	245.6	259.0	342.1	414.5	399.8	411.5	534.9	374.5
1973	490.5	456.7	468.0	527.4	279.4	227.2	269.3	372.7	416.0	421.7	393.6	449.7	395.9
1974	493.9	464.3	442.6	499.7	338.4	266.2	238.4	337.6	433.9	452.7	429.0	486.9	367.4
1975	496.6	471.0	427.4	508.6	244.2	248.5	220.9	298.5	450.7	-25.7	-25.7	-25.7	373.4
AVERAGE	543.4	494.9	470.0	537.5	330.3	237.8	260.7	388.8	468.2	459.0	476.5	524.5	411.1
MEDIAN	537.3	496.7	467.6	538.1	320.9	235.6	257.3	378.6	463.5	472.8	495.9	538.3	399.2
80 PERCENTILE	501.6	464.3	431.6	499.8	279.4	216.1	241.1	337.6	416.0	417.5	442.8	487.5	374.5
60 PERCENTILE	531.6	483.3	469.5	527.4	312.7	227.2	247.4	370.8	450.4	452.7	475.9	522.8	394.3
40 PERCENTILE	552.3	509.5	472.4	549.6	342.1	245.6	265.4	396.1	480.0	486.5	499.1	544.5	404.4
20 PERCENTILE	575.1	523.5	509.4	572.6	380.7	258.5	278.6	430.0	521.6	526.7	529.6	584.0	450.6
MAXIMUM	673.0	573.4	588.6	634.1	441.0	272.3	325.7	558.6	573.1	566.8	595.1	614.8	501.0
MINIMUM	468.0	376.9	353.4	498.9	231.0	205.5	224.0	299.9	361.6	374.2	393.6	449.7	347.8

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 WITHOUT DEVELOPMENT LEVEL

78/02/17.

WATER QUALITY-YELLOWSTONE AT SIDNEY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	620.4	623.6	486.1	623.3	408.5	242.8	336.8	553.3	638.5	619.8	639.8	673.7	533.5
1940	743.6	636.9	609.8	623.3	439.9	248.7	354.9	651.2	653.5	524.0	680.6	676.9	558.5
1941	730.5	631.9	603.3	625.1	426.3	242.2	342.4	450.3	395.3	416.6	502.5	538.5	501.6
1942	582.1	593.0	451.8	584.6	374.8	268.0	301.6	461.0	573.9	549.5	546.8	646.3	463.6
1943	603.8	450.2	396.9	482.1	372.7	295.8	266.2	377.7	515.5	561.2	549.5	594.4	398.5
1944	601.3	564.7	426.0	536.6	388.9	313.6	281.5	442.5	550.4	557.4	568.3	660.4	425.1
1945	599.4	564.0	479.3	626.4	459.2	242.3	278.5	406.5	520.2	500.2	536.0	638.6	460.0
1946	564.3	554.0	493.4	611.8	433.6	252.3	315.7	497.8	511.3	480.6	523.9	588.0	485.8
1947	621.8	555.6	483.6	535.3	301.8	263.7	284.7	420.0	534.0	497.5	518.8	569.0	431.9
1948	582.6	545.4	472.5	577.4	385.3	296.7	294.1	445.0	605.9	573.1	562.2	697.4	450.6
1949	662.5	592.1	493.7	581.1	398.2	255.5	319.3	516.5	579.2	567.1	569.0	674.6	500.3
1950	645.0	567.1	491.7	521.5	446.7	242.3	285.5	395.8	516.5	488.7	541.4	554.5	454.3
1951	579.6	581.7	503.8	562.0	415.6	250.6	288.6	362.3	470.4	495.8	504.9	638.4	454.7
1952	581.4	517.3	479.8	425.9	309.9	266.7	310.9	446.6	573.8	604.9	612.7	654.1	450.6
1953	607.4	571.9	567.5	647.3	474.1	247.2	312.8	474.1	617.4	636.6	616.8	674.2	514.0
1954	677.1	592.1	580.8	609.3	399.3	235.0	306.5	454.4	591.5	622.2	615.8	654.2	515.9
1955	680.3	597.5	614.3	565.2	436.1	246.6	319.2	530.0	643.2	623.2	660.3	674.6	532.9
1956	602.4	575.7	473.8	571.9	350.4	242.1	312.0	462.8	571.1	615.0	566.8	630.9	464.8
1957	631.9	584.5	526.4	577.5	360.2	299.4	286.7	454.7	523.8	545.3	544.5	598.7	462.2
1958	602.1	581.5	529.1	626.8	404.0	249.5	322.9	520.6	607.6	611.8	609.0	653.0	516.8
1959	637.1	586.5	395.5	617.5	457.3	263.3	307.4	517.8	597.4	565.8	616.0	620.7	487.9
1960	650.4	561.5	457.0	619.6	495.0	238.2	360.4	588.6	638.2	660.6	624.0	702.9	554.5
1961	669.1	612.0	622.4	691.5	517.9	241.1	385.2	730.1	555.8	523.3	544.9	668.3	579.3
1962	649.2	523.6	525.9	569.8	352.6	285.8	284.9	417.6	521.2	520.1	558.2	600.0	480.9
1963	609.2	488.3	505.7	611.7	348.1	293.7	304.7	498.5	534.6	587.9	572.1	658.7	455.3
1964	593.8	545.7	568.6	595.6	383.5	284.7	278.5	428.6	525.5	584.6	577.5	648.5	449.0
1965	566.3	532.4	520.1	442.5	346.1	296.8	264.4	364.1	457.3	457.8	567.7	582.4	397.4
1966	600.0	559.0	496.1	633.8	448.1	234.1	343.3	566.6	625.5	617.4	596.6	595.2	540.2
1967	640.5	587.0	579.2	593.5	394.4	295.2	262.1	399.6	515.2	504.3	523.5	559.3	474.2
1968	521.1	495.7	447.1	604.5	443.4	289.3	288.9	380.3	433.6	474.3	494.4	557.0	426.2
1969	554.4	529.6	412.2	556.9	373.2	247.4	291.2	446.4	565.5	550.0	559.4	596.7	456.3
1970	564.3	515.8	527.6	618.2	332.1	289.3	286.5	443.2	533.8	529.6	542.3	550.6	438.8
1971	540.0	423.9	482.4	502.2	333.1	295.9	282.6	402.1	476.8	402.7	485.2	570.5	394.9
1972	566.4	497.3	349.8	556.4	370.3	277.2	302.0	406.4	487.1	465.1	471.4	589.4	423.6
1973	543.4	509.9	497.1	572.6	330.3	263.0	312.8	443.6	465.7	475.1	472.7	531.3	448.2
1974	557.1	520.4	517.6	554.3	398.5	291.3	279.0	403.0	502.4	507.9	489.5	546.9	426.5
1975	549.6	547.7	464.7	547.9	275.4	282.6	258.9	354.4	505.8	0.0	0.0	0.0	422.7
AVERAGE	610.0	549.9	496.6	578.5	393.9	269.5	303.1	462.5	544.1	527.5	545.0	600.8	468.2
MEDIAN	602.1	554.0	493.7	581.1	394.4	263.7	301.6	446.4	534.0	545.3	558.2	620.7	454.7
80 PERCENTILE	564.3	515.8	426.0	536.6	348.1	246.6	281.5	402.1	487.1	480.6	504.9	557.0	426.2
60 PERCENTILE	593.8	533.0	479.8	571.9	374.8	262.3	288.6	442.5	521.2	520.1	544.5	594.4	449.0
40 PERCENTILE	609.2	564.0	505.7	604.5	404.0	277.2	307.4	454.7	565.5	561.2	567.7	646.3	463.6
20 PERCENTILE	650.4	586.5	567.5	623.3	443.4	293.7	319.3	517.8	605.9	611.8	612.7	668.3	515.9
MAXIMUM	743.6	631.9	622.4	691.5	517.9	313.6	385.2	730.1	653.5	660.6	680.6	702.9	579.3
MINIMUM	521.1	423.9	349.8	425.9	301.8	234.1	262.1	362.3	395.3	402.7	471.4	531.3	394.9

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1975 WITHOUT DEVELOPMENT LEVEL

78/02/17.

WATER QUALITY-YELLOWSTONE AT BILLINGS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	317.6	322.2	274.7	252.5	146.1	121.9	171.8	266.4	337.5	323.9	345.2	346.8	230.0
1940	336.9	320.8	320.4	289.8	156.4	120.3	192.2	329.8	346.3	294.7	334.7	344.4	240.7
1941	323.6	316.3	325.6	296.2	170.1	122.3	186.3	247.1	215.3	208.5	243.4	269.8	225.7
1942	305.8	297.9	261.4	226.8	150.0	117.6	133.0	231.9	286.0	278.9	278.9	240.0	198.1
1943	310.5	274.6	229.9	198.0	150.3	113.8	97.0	186.1	240.0	269.4	278.7	291.1	169.9
1944	310.0	302.4	293.0	304.7	174.3	116.1	124.4	232.3	265.4	278.4	293.3	334.9	202.2
1945	310.3	308.6	300.4	297.0	181.0	117.5	113.7	200.0	261.0	262.5	270.5	310.0	199.7
1946	302.1	284.6	282.7	231.4	162.6	119.3	154.4	252.8	281.6	258.4	288.6	300.2	211.6
1947	310.3	308.3	284.0	246.7	154.6	117.4	125.7	202.7	255.3	246.2	270.3	280.7	190.2
1948	309.7	295.6	281.6	260.3	135.0	114.0	142.4	216.7	301.2	293.8	308.2	344.1	189.9
1949	322.5	305.7	290.9	241.9	140.2	118.6	159.8	253.8	284.7	271.9	294.9	356.2	210.3
1950	335.3	314.0	284.4	271.1	172.9	116.5	109.6	189.8	247.6	234.4	238.7	251.1	189.8
1951	307.4	281.4	266.2	247.5	183.1	119.3	120.3	175.7	242.6	239.6	252.8	296.7	189.4
1952	309.8	294.9	283.1	215.2	125.0	116.7	144.4	208.2	283.6	305.8	317.3	311.9	191.7
1953	307.7	302.1	310.9	292.5	199.4	117.6	136.7	219.8	301.2	321.5	307.6	306.0	216.3
1954	321.7	298.0	318.2	275.2	146.4	120.6	129.2	220.7	299.7	307.9	309.8	318.5	211.4
1955	317.7	315.2	315.5	259.4	181.6	119.6	155.0	242.4	320.2	309.8	325.8	306.8	228.1
1956	310.4	300.0	258.3	236.6	126.1	115.1	143.8	215.1	283.5	307.3	291.2	302.7	188.0
1957	329.7	301.0	288.2	280.8	139.0	113.6	121.3	218.3	254.8	262.3	273.4	289.2	183.3
1958	312.5	304.7	304.8	284.4	139.5	120.1	171.8	247.1	309.4	325.2	301.2	302.9	220.1
1959	315.8	309.6	292.8	267.7	175.9	114.9	132.6	231.0	292.0	259.4	276.4	289.3	198.6
1960	322.9	302.7	293.0	270.3	188.6	119.8	188.7	257.7	335.0	329.4	315.0	326.4	239.9
1961	317.3	305.5	329.5	367.3	185.6	120.3	199.8	303.6	254.4	242.7	249.9	287.8	237.1
1962	314.5	275.0	274.0	225.0	149.2	116.0	130.9	198.8	247.6	270.0	287.1	294.7	189.5
1963	318.1	273.2	302.0	283.1	151.1	115.7	148.1	242.2	270.5	299.7	299.2	324.1	201.8
1964	314.4	297.1	311.2	273.6	156.9	116.1	117.2	210.8	278.7	307.6	296.0	295.0	195.3
1965	300.0	285.3	295.7	237.6	150.3	114.2	102.9	176.8	213.7	226.5	260.6	284.1	174.6
1966	305.7	289.9	279.5	259.3	148.9	121.7	169.8	250.9	292.6	290.7	287.2	290.2	221.0
1967	303.8	292.5	283.0	281.5	158.9	112.8	97.5	199.8	249.3	246.0	264.0	287.2	175.0
1968	309.5	274.8	268.1	245.7	179.6	114.5	117.8	176.7	207.0	231.3	248.6	283.3	181.9
1969	306.2	287.0	268.8	224.2	138.7	118.6	128.6	225.9	291.4	267.7	280.6	292.3	195.7
1970	311.5	294.1	299.3	282.8	136.4	115.9	123.9	214.1	231.3	245.2	271.1	291.4	182.0
1971	303.9	273.6	283.2	243.7	143.2	113.7	109.8	190.6	216.9	228.6	251.3	282.9	173.5
1972	310.0	281.1	239.2	259.8	156.0	114.8	133.1	187.8	216.2	216.4	242.7	283.2	183.1
1973	303.3	289.8	280.2	241.7	145.9	119.1	151.0	236.3	237.7	261.4	267.9	284.4	203.4
1974	303.6	299.0	292.6	286.1	164.7	112.8	106.8	185.8	286.1	265.2	266.7	298.4	177.4
1975	313.2	310.1	274.2	237.2	142.4	114.9	76.7	178.2	247.4	0.0	0.0	0.0	175.7
AVERAGE	313.1	297.0	287.7	261.5	155.5	117.1	137.0	222.3	269.3	264.6	275.4	292.9	199.8
MEDIAN	310.4	297.9	286.1	259.8	150.3	116.7	132.6	218.3	269.3	267.7	278.9	294.7	195.7
80 PERCENTILE	305.7	281.4	268.8	236.6	139.0	114.0	113.7	189.8	237.7	239.6	252.8	283.3	182.0
60 PERCENTILE	309.5	294.1	283.0	247.5	146.4	116.0	125.7	210.8	254.8	261.4	271.1	290.2	189.9
40 PERCENTILE	312.5	301.0	292.8	270.3	156.9	117.6	142.4	231.0	283.5	278.4	288.6	300.2	201.8
20 PERCENTILE	318.1	308.3	304.8	284.1	174.3	119.8	159.8	247.1	299.7	307.3	307.6	318.5	220.1
MAXIMUM	336.9	322.2	329.5	367.3	199.4	122.3	199.8	329.8	346.3	329.4	345.2	356.2	240.7
MINIMUM	300.0	273.2	229.9	198.0	125.0	112.8	97.0	175.7	207.0	208.5	238.7	251.1	169.9

STUDY NO. 1

YELLOWSTONE LEVEL 9 OPERATION STUDY
1975 WITHOUT DEVELOPMENT LEVEL

78/07/17.

WATER QUALITY-TONGUE - MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	737.8	621.9	493.0	599.3	669.5	317.7	731.1	0.0	690.4	510.7	701.5	795.0	595.5
1940	762.2	647.8	546.9	770.9	643.2	407.4	507.5	0.0	0.0	503.7	728.2	801.0	626.6
1941	768.8	649.0	606.8	777.6	545.1	337.5	0.0	991.7	443.3	486.0	506.8	617.2	545.5
1942	643.7	640.9	484.8	577.6	468.9	275.9	458.5	0.0	593.7	461.4	519.4	617.2	490.7
1943	669.1	510.5	430.3	469.7	453.5	268.1	498.5	0.0	553.7	515.7	524.9	695.9	463.2
1944	696.9	674.7	458.0	552.9	406.0	209.8	283.9	0.0	884.1	529.0	507.7	626.3	420.4
1945	663.7	619.2	489.5	585.5	512.8	255.6	290.1	0.0	527.1	424.6	521.2	651.3	470.8
1946	625.3	586.9	420.8	545.4	470.6	270.1	326.5	581.5	448.3	421.5	510.3	599.4	455.6
1947	672.9	518.2	368.5	507.3	405.7	292.2	292.0	655.4	550.7	515.0	512.3	630.0	441.6
1948	618.5	535.2	490.7	516.8	426.0	290.6	293.9	518.3	636.4	506.6	512.9	720.1	496.5
1949	704.5	671.9	375.1	555.2	454.6	315.0	834.9	0.0	1306.7	566.2	536.1	567.2	492.1
1950	691.3	638.1	505.8	571.1	492.1	368.1	429.0	616.4	494.9	492.3	547.3	644.3	510.8
1951	647.7	589.4	547.0	622.0	503.6	340.3	374.0	450.6	425.3	497.1	517.6	704.9	521.9
1952	727.8	628.6	469.4	449.6	430.4	325.0	464.8	677.3	595.8	495.0	620.9	690.9	496.4
1953	678.3	632.7	551.2	671.5	514.3	277.4	664.6	0.0	0.0	525.5	551.2	697.8	570.7
1954	682.0	564.7	546.3	626.9	562.9	458.8	0.0	612.7	1048.1	644.2	626.8	690.9	607.7
1955	710.3	679.1	534.1	560.6	451.9	308.3	390.7	1082.5	0.0	699.9	692.1	742.0	592.2
1956	702.6	692.7	474.6	496.9	478.6	323.9	0.0	641.1	723.5	646.2	586.4	678.7	522.2
1957	735.8	650.6	541.6	580.6	503.4	266.2	390.1	671.5	475.3	526.9	699.6	729.9	583.9
1958	695.0	628.6	545.0	636.6	495.6	372.7	354.9	809.9	1306.7	581.7	603.1	643.6	593.4
1959	640.1	612.6	368.4	584.5	510.0	423.0	606.7	686.9	524.8	608.2	656.9	688.3	519.5
1960	667.3	608.7	425.4	589.7	765.9	0.0	0.0	0.0	0.0	783.0	781.2	846.8	614.3
1961	804.7	682.0	646.0	905.3	0.0	0.0	0.0	0.0	684.7	682.3	763.9	748.9	758.7
1962	729.5	555.0	459.3	531.2	455.7	269.3	400.0	598.9	506.7	532.6	631.0	721.7	480.8
1963	733.8	337.4	478.6	624.1	406.0	233.4	415.0	605.6	523.7	732.1	757.8	843.3	465.4
1964	721.9	613.9	559.5	597.8	451.8	286.2	283.2	648.5	479.1	546.5	636.4	721.7	473.1
1965	692.1	692.7	653.0	695.5	437.1	298.0	312.8	506.4	465.4	436.1	571.5	706.4	447.6
1966	720.0	647.8	595.4	670.3	594.7	472.8	614.5	727.5	617.0	740.6	746.5	808.7	643.4
1967	706.4	580.6	515.2	586.0	476.2	217.1	261.0	583.2	486.5	540.9	575.2	648.2	448.9
1968	573.3	398.8	428.9	560.6	490.7	297.6	321.5	325.5	405.9	485.9	581.0	699.2	499.0
1969	694.8	594.5	346.2	480.6	426.1	340.5	282.5	527.4	523.7	556.9	686.9	680.5	481.7
1970	644.2	561.0	489.9	533.0	397.7	238.8	394.5	554.8	508.5	525.5	593.7	693.6	492.1
1971	672.8	90.5	390.6	496.8	420.7	277.8	457.5	616.4	580.6	417.2	565.0	699.2	423.2
1972	696.9	518.2	364.1	489.8	455.3	296.4	397.0	449.5	683.8	687.8	571.5	728.2	458.4
1973	623.6	551.5	525.0	594.7	485.9	265.1	374.5	476.2	440.5	442.2	552.7	735.0	465.5
1974	657.7	500.7	517.6	585.5	695.0	300.2	389.6	668.7	543.5	544.1	586.4	617.2	494.8
1975	601.8	671.9	607.5	501.9	383.2	296.8	175.5	289.1	476.6	0.0	0.0	0.0	410.6
AVERAGE	649.1	574.3	478.1	578.1	470.8	298.2	352.2	428.5	536.1	526.4	587.0	680.1	503.7
MEDIAN	692.0	608.7	478.6	571.1	495.7	290.6	354.9	503.2	508.5	525.5	581.0	693.6	486.4
90 PERCENTILE	692.1	516.2	420.8	496.9	420.7	238.8	253.9	0.0	480.5	461.4	521.2	670.0	492.1
80 PERCENTILE	647.3	580.6	498.0	552.9	493.3	270.1	321.5	450.6	483.8	506.6	565.0	644.3	465.5
40 PERCENTILE	696.9	671.9	505.8	585.5	478.6	300.2	390.7	581.5	527.1	532.6	603.1	704.9	503.9
20 PERCENTILE	727.8	647.8	545.0	624.1	512.8	340.5	458.5	641.1	636.4	608.2	646.9	735.0	545.5
MAXIMUM	804.7	692.0	646.0	905.3	765.9	472.8	834.9	1082.5	1306.7	783.0	763.9	846.8	758.7
MINIMUM	457.7	90.5	368.6	485.5	0.0	0.0	0.0	0.0	0.0	417.2	586.8	567.2	420.4

1985

Without Development Level

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 WITHOUT DEVELOPMENT LEVEL

77/11/30.

WATER QUALITY-YELLOWSTONE AT BILLINGS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	317.3	322.0	274.6	252.6	146.3	121.9	172.8	269.6	340.6	324.0	344.5	346.2	230.6
1940	336.7	320.7	320.2	290.0	156.7	120.3	193.3	337.4	349.7	294.8	334.0	343.8	241.4
1941	325.4	315.2	325.4	296.5	179.5	122.3	187.5	249.5	216.4	206.6	243.0	269.5	226.3
1942	305.8	297.8	281.5	226.9	150.2	117.7	133.5	233.8	288.0	279.0	278.4	279.6	198.5
1943	310.4	274.3	229.8	198.0	150.6	113.8	97.2	187.0	241.2	269.4	278.2	290.7	170.2
1944	309.9	302.3	292.8	305.0	174.7	116.2	124.6	234.2	267.0	278.5	292.8	334.4	202.6
1945	319.7	308.3	300.2	297.2	181.4	117.5	118.1	201.0	262.5	262.6	270.1	309.6	200.1
1946	302.0	284.6	282.8	231.5	162.9	119.3	155.1	255.4	283.4	256.5	288.1	299.8	212.1
1947	310.2	304.1	285.9	246.8	134.4	117.5	126.1	203.9	256.8	246.3	269.9	280.5	190.6
1948	309.5	295.5	281.4	260.4	135.2	114.0	142.9	218.2	303.4	293.8	307.7	343.5	190.2
1949	322.3	305.6	290.7	242.0	140.4	118.6	160.5	256.3	286.6	272.0	294.4	355.5	210.8
1950	335.1	313.8	284.3	271.3	173.5	116.6	110.0	190.7	249.0	234.4	256.3	250.8	190.2
1951	307.5	291.5	266.1	247.6	143.3	119.3	120.7	176.3	243.9	239.7	252.4	296.2	189.7
1952	309.7	294.3	285.0	215.3	125.2	116.7	145.0	209.5	285.5	305.9	316.7	311.5	192.0
1953	307.5	301.9	310.7	292.8	200.2	117.6	137.2	221.3	305.4	321.6	307.1	305.6	216.8
1954	321.5	297.9	315.0	275.4	146.5	120.6	129.7	222.3	301.9	308.0	309.3	318.0	211.9
1955	317.6	315.1	315.3	259.6	182.0	119.6	155.7	244.7	322.9	309.9	325.2	306.3	228.7
1956	310.3	299.9	256.2	236.7	126.2	115.1	144.4	216.6	285.4	307.4	290.7	302.3	188.4
1957	329.6	300.9	285.1	281.0	139.2	115.6	121.7	219.9	256.3	262.3	272.9	288.8	185.6
1958	312.4	304.6	304.6	284.6	139.7	120.1	172.8	249.5	311.8	325.4	300.7	302.5	220.6
1959	315.7	309.5	292.6	267.6	176.3	114.9	133.1	232.9	294.1	259.5	275.9	288.9	199.2
1960	322.8	302.6	292.8	270.5	189.0	119.8	190.0	260.5	338.0	329.6	314.4	325.9	240.7
1961	317.2	305.4	329.2	307.8	186.0	120.3	201.4	309.1	255.9	242.7	249.5	287.4	237.8
1962	314.4	274.9	273.9	225.1	149.4	115.0	131.4	199.9	249.0	270.1	286.6	294.3	189.8
1963	318.0	275.2	301.4	283.3	151.4	115.7	148.8	244.5	272.1	299.8	298.7	323.6	202.2
1964	314.3	297.0	311.0	273.8	157.1	116.1	117.6	212.1	280.6	307.9	295.4	294.6	195.6
1965	299.9	285.2	295.6	237.7	158.6	114.3	103.2	177.5	214.7	220.6	260.2	283.7	174.8
1966	305.6	289.3	279.4	259.5	149.1	121.7	170.7	255.5	294.7	290.8	286.7	289.8	221.5
1967	303.7	292.4	282.6	281.7	159.2	112.8	97.8	200.9	271.0	246.1	263.5	286.8	175.2
1968	309.4	274.7	285.0	285.9	180.0	114.5	114.2	177.4	208.0	231.3	248.5	262.9	182.2
1969	306.1	286.9	283.7	224.5	156.9	114.6	129.0	227.6	293.4	267.8	280.1	291.9	196.1
1970	311.4	294.0	299.1	285.0	134.6	115.9	124.5	215.5	232.5	245.2	270.7	291.0	182.2
1971	303.8	275.5	285.0	243.8	143.5	113.7	110.1	191.5	217.9	228.7	251.0	282.5	173.8
1972	304.9	251.1	259.1	260.0	156.3	114.9	133.6	188.6	217.3	216.4	242.5	282.8	183.4
1973	303.2	249.8	280.0	241.8	146.1	119.1	151.7	238.3	238.9	261.4	267.5	284.0	203.9
1974	305.5	295.9	292.4	246.2	165.0	112.8	109.1	186.7	247.4	265.2	266.3	298.0	177.7
1975	313.0	313.0	274.0	257.5	142.6	114.9	76.9	178.9	248.8	0.0	1212.1	1180.4	175.9
AVERAGE	315.0	296.9	287.0	261.5	155.4	117.1	137.6	224.1	271.1	264.6	307.7	324.4	200.2
MEDIAN	310.3	297.4	288.0	260.9	150.8	116.7	133.1	219.9	271.0	267.8	278.4	294.3	196.1

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STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 WITHOUT DEVELOPMENT LEVEL

77/11/30.

WATER QUALITY-TONGUE - MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	742.6	620.1	454.0	600.7	0.0	322.7	0.0	0.0	0.0	510.1	701.7	758.3	563.5
1940	767.2	652.1	576.3	779.5	761.2	423.3	701.3	0.0	0.0	505.1	724.7	805.3	645.5
1941	773.4	673.3	611.7	799.9	567.2	343.9	0.0	0.0	480.0	447.6	506.9	618.7	552.6
1942	666.1	645.2	465.6	576.7	477.0	278.8	544.4	0.0	612.3	461.0	519.5	618.7	497.3
1943	673.3	513.9	431.1	470.1	460.1	270.8	544.4	0.0	612.3	515.0	525.0	637.5	468.5
1944	701.5	679.3	459.0	553.7	409.7	211.1	210.4	0.0	0.0	528.2	507.8	627.9	423.5
1945	666.1	623.4	491.0	585.7	527.2	258.0	504.6	0.0	567.6	424.3	521.3	653.1	476.4
1946	629.4	590.6	421.5	546.1	474.9	272.9	347.0	792.7	461.9	421.2	510.4	600.8	462.1
1947	475.9	521.7	365.9	507.8	409.4	295.9	306.7	0.0	606.8	514.3	552.4	631.7	446.6
1948	622.6	555.3	451.3	517.4	430.7	294.2	264.2	682.6	868.9	505.9	513.0	722.8	463.0
1949	709.1	670.4	575.6	554.0	461.4	319.9	0.0	0.0	0.0	567.1	544.2	568.3	495.5
1950	695.9	642.8	507.6	572.1	503.1	377.6	486.7	0.0	520.9	491.8	547.4	686.5	542.4
1951	651.9	593.4	549.8	623.8	516.3	391.4	406.9	523.5	434.9	496.5	517.7	707.4	533.6
1952	732.6	632.8	470.6	449.9	435.5	330.5	558.2	0.0	704.9	494.4	621.1	693.2	493.7
1953	682.7	636.9	554.1	674.4	528.9	280.4	0.0	0.0	0.0	524.8	551.3	700.2	536.3
1954	686.4	568.3	549.1	628.7	591.3	491.6	0.0	0.0	0.0	642.1	627.1	693.2	621.2
1955	714.9	683.7	536.6	581.5	458.5	318.8	429.8	0.0	0.0	696.6	692.5	745.1	540.2
1956	707.2	636.9	475.9	497.3	487.4	329.4	0.0	0.0	0.0	644.0	586.6	678.8	529.0
1957	740.5	655.0	544.3	581.7	514.3	268.9	375.0	0.0	495.1	526.1	659.9	732.7	512.4
1958	699.6	632.8	547.7	638.6	507.0	382.8	582.1	0.0	0.0	540.8	603.3	665.5	563.8
1959	664.4	616.4	369.8	545.2	525.8	442.7	0.0	595.3	564.1	606.7	657.2	690.5	529.4
1960	671.7	612.8	426.2	591.0	0.0	0.0	0.0	0.0	0.0	776.2	741.8	873.1	617.0
1961	809.9	686.6	654.1	947.6	0.0	0.0	0.0	0.0	0.0	640.2	764.5	768.4	742.5
1962	734.6	558.8	460.4	531.6	462.6	262.8	443.2	0.0	537.3	531.8	631.2	724.4	488.4
1963	738.5	339.6	479.9	625.8	409.7	235.2	465.9	0.0	562.4	727.6	758.5	869.4	472.0
1964	726.7	614.1	562.7	599.1	458.5	248.2	296.7	519.8	500.0	545.6	636.6	724.4	480.6
1965	636.2	435.7	454.0	435.7	442.6	301.9	330.7	645.1	482.7	435.7	571.6	708.9	453.6
1966	724.7	652.1	537.8	673.2	640.5	513.6	0.0	0.0	773.4	735.8	747.2	813.2	667.7
1967	711.1	584.5	517.1	587.2	465.2	218.5	272.0	636.1	484.1	540.0	575.3	670.5	454.9
1968	577.0	401.5	429.7	561.5	501.5	259.5	341.1	349.0	413.1	445.6	581.1	701.6	444.6
1969	659.1	596.5	369.6	481.0	430.9	347.2	296.0	718.0	562.4	555.9	687.3	682.6	468.5
1970	648.4	564.8	491.4	533.7	401.1	240.7	381.5	955.2	539.9	524.8	593.9	696.0	458.4
1971	677.2	91.1	351.0	487.2	425.1	280.8	542.2	0.0	528.7	416.9	565.1	701.6	427.6
1972	701.5	521.7	364.5	490.2	462.2	298.1	438.9	521.6	506.1	487.3	571.6	731.0	465.1
1973	627.6	555.2	527.2	596.0	409.6	267.7	407.6	572.0	452.6	461.7	552.8	737.9	472.6
1974	660.7	504.1	519.7	586.7	461.4	304.2	428.2	556.9	594.3	543.2	586.6	610.7	504.0
1975	404.5	626.1	408.1	502.3	386.0	238.7	180.5	306.5	496.7	1105.2	0.0	0.0	414.9
AVERAGE	673.4	576.2	474.9	580.7	444.0	294.5	288.9	225.7	388.2	555.0	587.2	682.6	511.6
MEDIAN	686.4	612.8	479.9	572.1	461.4	294.2	330.7	0.0	484.1	524.8	581.1	696.0	493.7

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 WITHOUT DEVELOPMENT LEVEL

77/11/30.

WATER QUALITY-YELLOWSTONE-MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	556.0	565.1	497.9	563.9	356.7	215.7	290.0	469.4	562.3	529.9	575.8	605.3	473.4
1940	673.7	566.7	552.3	576.3	381.0	215.4	311.1	575.8	578.7	499.1	595.3	610.5	499.1
1941	647.1	574.4	555.1	581.0	382.9	207.2	300.7	419.6	366.4	375.4	443.1	487.7	455.2
1942	512.8	479.9	440.1	519.9	311.1	235.8	258.4	402.1	499.8	484.0	498.3	539.2	406.6
1943	539.9	436.9	395.2	449.7	312.4	265.4	229.5	328.2	442.0	473.9	479.9	523.7	354.2
1944	533.5	513.0	442.5	540.0	345.1	266.6	242.4	387.2	472.3	487.5	499.1	585.4	387.3
1945	535.7	504.7	465.7	561.2	403.4	233.0	239.8	349.9	453.9	432.8	462.7	543.9	404.7
1946	506.3	485.7	466.1	545.7	369.4	222.5	277.5	422.0	455.7	442.4	479.3	545.0	430.5
1947	573.5	529.2	458.5	499.4	249.5	234.9	243.6	360.3	456.1	430.4	459.2	498.1	386.6
1948	515.9	487.2	438.6	537.7	297.4	261.4	257.4	387.0	521.5	499.6	496.3	615.8	396.4
1949	600.4	524.0	445.2	538.8	315.9	225.0	276.1	437.7	492.8	485.6	495.0	600.1	434.8
1950	583.4	511.9	428.9	527.0	388.5	232.4	241.4	330.9	435.2	404.8	443.1	470.6	393.0
1951	516.6	478.2	432.0	537.2	323.9	225.7	244.0	305.7	409.2	418.3	440.5	499.1	386.6
1952	519.7	480.9	435.7	488.8	234.0	235.8	266.7	376.7	492.0	508.5	530.1	578.0	401.4
1953	535.1	514.9	510.0	584.2	422.6	232.8	268.6	409.0	533.8	545.0	556.3	586.6	450.0
1954	574.2	497.7	527.7	577.6	334.2	207.8	263.8	405.4	531.7	538.0	544.5	586.5	453.5
1955	586.9	533.5	557.9	535.9	386.9	216.7	280.2	456.7	556.9	540.8	574.0	578.8	470.4
1956	543.2	504.3	449.8	520.7	260.6	252.5	268.7	398.9	499.2	528.0	498.4	567.9	404.1
1957	575.8	513.2	491.9	521.5	272.4	271.6	244.9	384.5	438.2	463.3	469.0	514.9	378.8
1958	532.0	498.9	496.8	578.7	318.3	219.1	284.5	439.0	527.1	537.1	534.2	569.7	450.3
1959	560.8	520.6	413.9	555.6	397.2	237.9	266.6	432.6	517.1	488.2	520.9	541.4	429.9
1960	574.6	511.3	469.2	569.9	423.6	210.2	310.8	467.9	554.0	567.9	541.5	614.4	490.3
1961	607.5	548.1	589.6	654.9	445.2	210.3	330.2	581.4	479.5	452.4	462.8	577.8	504.4
1962	590.5	489.6	495.7	521.7	316.3	245.0	252.6	365.9	450.0	464.7	500.1	538.6	401.3
1963	543.3	453.2	490.2	556.2	312.1	247.9	268.0	429.3	469.0	517.6	506.9	576.5	414.2
1964	537.3	494.9	524.5	543.2	325.0	249.5	241.9	377.2	469.0	511.9	507.8	545.4	398.4
1965	499.4	471.4	472.9	453.7	303.3	257.8	231.6	315.6	377.7	397.4	500.3	521.7	357.3
1966	552.8	511.7	470.0	572.5	374.9	204.9	298.2	491.7	550.6	557.7	527.0	536.2	477.1
1967	569.3	523.4	540.4	550.6	348.3	259.4	224.5	344.3	458.0	452.7	462.6	471.2	375.2
1968	464.2	427.4	436.9	551.7	385.7	256.6	248.3	325.6	381.0	413.9	446.4	507.1	375.4
1969	496.3	474.8	399.7	524.0	302.0	218.0	253.5	376.7	485.6	480.4	499.6	488.4	403.4
1970	502.0	470.3	509.6	573.6	274.4	257.1	245.3	379.6	457.1	459.1	476.3	502.2	385.5
1971	487.0	477.1	400.5	455.6	268.5	259.0	243.6	339.1	412.2	377.1	427.7	465.4	349.4
1972	502.9	456.0	533.6	500.6	317.0	244.9	260.1	347.3	419.4	400.5	411.8	535.8	376.4
1973	490.9	457.1	466.3	528.3	282.4	226.5	270.8	379.2	420.9	422.6	393.9	450.6	398.1
1974	494.2	464.7	483.1	500.6	341.3	265.5	239.1	342.6	439.0	453.7	429.3	487.8	369.3
1975	486.9	471.4	427.8	509.5	247.1	247.9	221.3	302.2	456.1	-25.7	-25.7	-25.7	375.3
AVERAGE	544.0	495.4	470.6	535.4	333.2	237.1	262.0	396.2	473.5	459.9	477.0	525.4	413.4
MEDIAN	537.3	497.7	466.1	538.8	325.9	234.9	258.4	384.5	469.0	475.9	496.3	539.2	401.4

STUDY NO. 1

YELLOWSTONE LEVEL 3 OPERATION STUDY
1985 WITHOUT DEVELOPMENT LEVEL

77/11/30.

WATER QUALITY-YELLOWSTONE AT SIDNEY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	620.7	624.5	485.4	524.1	413.0	241.8	340.1	574.0	647.5	620.3	639.0	673.6	537.9
1940	705.3	627.4	610.2	524.6	446.3	247.7	362.2	702.0	663.1	524.6	679.7	677.0	564.8
1941	741.4	632.3	603.9	628.2	430.8	241.2	346.7	485.0	402.6	417.6	502.9	539.7	506.1
1942	582.8	535.3	452.0	585.7	379.4	266.9	303.6	474.2	582.6	550.5	548.6	646.6	467.1
1943	504.2	459.4	397.1	463.0	377.4	294.7	267.1	383.8	523.5	562.3	549.4	594.8	400.9
1944	601.5	565.1	426.2	537.6	393.6	312.6	282.7	455.0	558.1	558.3	568.1	660.7	427.9
1945	594.7	564.5	479.6	627.3	463.7	261.2	279.7	415.3	529.3	501.0	535.8	638.9	463.5
1946	584.5	554.3	495.6	612.6	438.9	251.3	318.7	515.0	520.2	481.3	523.6	588.4	489.9
1947	622.2	556.1	403.6	546.2	506.4	262.6	286.1	429.1	542.1	498.5	518.5	569.4	434.9
1948	582.9	545.5	472.8	578.5	390.0	293.6	295.8	457.7	616.4	574.2	562.0	697.8	454.1
1949	663.0	592.6	494.0	561.9	403.1	254.4	322.0	532.7	586.9	566.2	568.7	675.0	504.4
1950	665.4	567.4	492.1	522.2	451.2	261.3	286.9	403.6	524.3	489.4	541.1	554.9	457.6
1951	579.4	542.1	504.1	563.1	420.2	249.6	290.0	369.3	478.6	496.2	504.7	638.8	458.1
1952	561.7	517.6	480.1	426.7	314.5	263.6	313.4	457.7	582.6	606.1	612.4	654.5	453.9
1953	607.7	572.3	568.0	648.2	478.4	246.2	315.0	468.8	625.8	637.1	616.1	674.2	518.4
1954	676.6	633.0	581.9	610.1	403.8	234.1	308.0	466.7	600.1	622.7	617.1	656.0	520.4
1955	680.7	598.1	614.9	563.9	440.5	245.6	322.1	551.5	651.3	623.9	659.3	674.5	537.9
1956	604.2	577.6	474.9	572.9	355.0	281.1	314.1	476.2	579.5	616.0	566.5	631.3	468.4
1957	632.3	589.1	526.8	576.6	364.4	298.3	288.1	466.7	532.9	546.2	544.3	599.0	445.4
1958	602.8	582.1	529.5	627.6	408.5	248.5	326.0	540.8	616.1	613.9	609.4	654.0	521.6
1959	637.4	587.6	595.6	616.4	461.7	262.3	309.6	537.8	606.8	566.5	616.8	622.1	492.0
1960	650.9	562.0	457.3	620.5	488.7	237.4	366.7	618.4	646.8	661.3	623.3	705.0	559.4
1961	669.7	612.8	623.1	692.4	521.3	240.2	396.2	832.1	564.1	523.9	544.3	668.2	585.0
1962	649.7	524.0	526.3	571.0	357.4	284.7	286.2	428.3	530.3	521.0	558.0	600.3	444.3
1963	609.6	486.6	506.1	612.8	352.7	292.7	306.9	515.4	543.3	589.0	571.9	659.0	458.8
1964	594.1	548.1	569.1	596.6	388.2	283.7	279.7	439.1	533.6	585.7	577.3	648.9	452.3
1965	566.6	532.8	520.5	443.3	350.3	295.8	265.3	371.5	465.3	458.5	567.5	582.8	400.0
1966	500.5	559.5	495.4	634.6	452.6	233.2	348.0	593.1	636.4	618.3	596.0	595.2	545.4
1967	641.0	587.6	579.8	594.5	399.0	294.2	262.9	409.0	524.2	505.2	523.3	559.7	427.2
1968	521.2	496.6	447.3	605.6	448.0	285.3	290.4	388.7	441.1	475.0	494.2	557.3	429.2
1969	558.6	530.0	412.4	557.7	377.7	246.4	292.9	458.2	574.1	551.0	539.2	557.1	459.7
1970	564.5	518.2	526.0	619.3	336.7	288.3	288.0	454.6	541.8	530.5	542.0	550.9	441.9
1971	540.2	424.1	402.5	503.1	337.4	294.9	283.9	410.0	484.4	403.2	485.1	570.9	397.3
1972	566.6	497.6	344.9	557.3	374.9	276.1	304.0	416.5	495.6	465.8	471.3	589.7	426.6
1973	543.6	510.5	497.4	573.6	335.0	261.9	315.5	456.7	473.9	475.8	472.6	531.6	451.7
1974	557.5	520.7	518.0	555.5	403.2	290.3	280.1	412.0	510.4	508.7	469.4	547.2	429.4
1975	584.3	548.1	464.9	548.8	280.0	281.5	259.7	361.1	514.0	2149.4	1953.9	862.7	425.5
AVERAGE	610.4	550.4	497.0	579.4	398.5	268.4	305.5	479.1	552.7	586.4	597.6	624.5	471.9
MEDIAN	602.4	554.5	498.0	561.9	399.0	262.6	303.6	457.7	542.1	546.2	556.0	622.1	458.1

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 WITHOUT PROJECT DEVELOPMENT LEVEL

77/11/29.

WATER QUALITY OF GREYBULL RIVER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	540.9	554.7	565.0	575.4	573.8	567.0	544.1	563.3	565.4	567.7	545.5	545.1	0.0
1940	564.8	551.8	570.2	575.4	582.8	576.2	562.6	563.3	565.4	573.3	545.5	545.1	0.0
1941	572.6	572.3	572.6	582.3	582.4	575.7	562.6	563.3	565.4	540.9	523.4	524.9	0.0
1942	526.2	553.4	571.7	575.4	574.6	567.8	514.1	563.3	565.4	573.3	545.5	545.1	0.0
1943	572.9	565.3	564.9	575.4	492.5	483.0	408.1	563.3	565.4	559.9	542.9	543.8	0.0
1944	545.1	553.4	572.6	580.5	586.2	579.7	531.9	563.3	565.4	573.3	545.5	545.1	0.0
1945	573.3	572.3	572.6	582.0	586.8	586.8	469.7	563.3	565.4	561.6	544.7	545.1	0.0
1946	547.2	552.3	568.2	575.4	570.9	563.9	556.3	563.3	565.4	571.2	545.5	545.1	0.0
1947	572.7	556.1	572.6	575.4	559.6	552.2	478.9	563.3	565.4	560.1	543.2	544.0	0.0
1948	545.3	551.2	572.3	575.4	531.5	523.2	562.6	563.3	565.4	573.3	545.5	545.1	0.0
1949	572.6	572.3	572.6	576.8	553.8	546.2	562.6	563.3	565.4	573.3	545.5	545.1	0.0
1950	572.6	572.3	572.6	577.5	574.5	567.5	463.9	563.3	565.4	553.4	536.3	537.3	0.0
1951	538.6	548.6	570.8	575.4	538.6	530.6	432.4	563.3	565.4	552.9	535.7	536.8	0.0
1952	538.1	553.0	572.6	575.4	534.3	526.2	558.7	563.3	565.4	573.1	545.5	545.1	0.0
1953	572.4	562.2	570.5	575.4	584.2	577.6	528.8	563.3	565.4	573.3	545.5	545.1	0.0
1954	572.1	563.3	572.6	575.4	564.6	557.4	514.8	563.3	565.4	573.3	545.5	545.1	0.0
1955	572.6	572.3	572.6	584.0	586.8	586.8	562.6	563.3	565.4	573.3	545.5	545.1	0.0
1956	571.7	572.3	567.3	575.4	477.8	467.7	535.6	563.3	565.4	571.7	545.5	545.1	0.0
1957	573.5	557.5	572.6	576.2	510.0	500.9	499.1	563.3	565.4	564.9	545.5	545.1	0.0
1958	556.3	553.1	572.6	578.5	549.0	541.4	562.6	563.3	565.4	573.3	545.5	545.1	0.0
1959	572.6	572.3	572.6	584.0	562.8	555.4	550.2	563.3	565.4	569.6	545.5	545.1	0.0
1960	570.5	557.9	562.9	575.4	586.8	586.8	562.6	563.3	565.4	573.3	545.5	545.1	0.0
1961	572.6	572.3	572.6	584.0	586.8	586.8	562.6	563.3	565.4	572.1	545.5	545.1	0.0
1962	570.2	556.7	570.0	575.4	538.3	530.3	520.9	563.3	565.4	567.2	545.5	545.1	0.0
1963	563.3	548.4	571.5	575.4	525.0	516.5	541.7	563.3	565.4	571.4	545.5	545.1	0.0
1964	570.3	556.5	571.8	576.3	568.3	561.2	461.3	563.3	565.4	570.4	545.5	545.1	0.0
1965	568.6	555.4	569.8	575.4	509.5	500.4	428.3	563.3	565.4	551.1	533.9	535.1	0.0
1966	536.3	552.8	564.1	575.4	586.8	586.8	562.6	563.3	565.4	573.3	545.5	545.1	0.0
1967	570.5	564.4	570.0	579.7	520.1	511.3	452.0	563.3	565.4	566.1	545.5	545.1	0.0
1968	560.0	549.8	568.1	581.4	584.5	577.9	531.8	563.3	565.4	558.1	541.1	542.0	0.0
1969	543.3	549.9	568.9	575.4	566.9	559.9	561.4	563.3	565.4	570.5	545.5	545.1	0.0
1970	570.3	553.6	571.0	581.9	514.5	505.5	516.6	563.3	565.4	565.4	545.5	545.1	0.0
1971	558.0	550.5	571.1	575.4	495.7	486.1	458.3	563.3	565.4	557.4	540.4	541.4	0.0
1972	542.6	562.8	563.8	575.4	586.8	586.8	562.6	563.3	565.4	566.1	545.5	545.1	0.0
1973	560.1	549.7	559.9	575.4	536.9	528.7	540.0	563.3	565.4	557.2	540.2	541.2	0.0
1974	542.4	550.6	568.9	575.4	476.2	466.0	484.4	563.3	565.4	565.8	545.5	545.1	0.0
1975	559.1	555.5	565.7	579.0	586.8	586.8	381.3	563.3	565.4	573.3	545.5	545.1	0.0
AVERAGE	560.3	558.6	569.8	577.4	552.6	546.2	516.0	563.3	565.4	566.6	543.5	543.5	0.0
MEDIAN	568.4	555.4	571.0	575.4	562.8	555.4	531.9	563.3	565.4	569.6	545.5	545.1	0.0

STUDY NO. 1

YELLOWSTONE LEVEL A OPERATION STUDY
1985 WITHOUT PROJECT DEVELOPMENT LEVEL

77/11/29.

WATER QUALITY OF SHOSHONE RIVER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	619.4	624.6	582.6	620.9	647.4	645.5	661.0	661.0	661.0	659.6	656.1	622.8	0.0
1940	634.4	628.9	624.2	640.6	560.8	628.6	652.8	661.0	653.3	634.4	615.2	612.6	0.0
1941	630.3	632.6	620.8	582.8	542.4	231.4	552.7	282.1	377.2	453.9	537.1	601.7	0.0
1942	629.7	614.4	591.5	537.1	363.9	247.6	577.2	646.0	634.2	618.1	604.0	620.1	0.0
1943	618.1	610.8	556.7	472.3	544.5	254.0	372.8	618.8	637.8	633.1	596.2	606.5	0.0
1944	618.1	615.1	607.8	567.3	352.3	85.7	458.6	645.3	654.0	631.7	607.5	618.8	0.0
1945	616.7	616.6	583.3	599.0	618.1	182.1	333.2	579.9	596.9	607.2	598.6	599.0	0.0
1946	605.1	610.0	586.7	571.6	639.2	544.1	616.7	646.7	565.9	562.9	582.8	614.0	0.0
1947	635.8	623.9	605.8	565.2	510.4	336.4	354.4	617.4	634.2	613.3	581.4	611.3	0.0
1948	618.8	617.3	576.5	527.9	565.6	370.2	557.4	639.2	635.6	621.5	602.6	611.9	0.0
1949	620.1	625.3	577.9	583.5	635.1	446.2	628.3	654.2	655.4	628.3	606.1	629.0	0.0
1950	631.7	615.8	613.3	616.6	639.2	620.9	620.8	623.5	612.4	597.6	590.6	599.0	0.0
1951	621.5	623.1	615.3	608.2	625.6	442.0	343.5	576.5	630.0	584.7	597.6	617.4	0.0
1952	622.2	617.3	601.7	420.2	346.9	240.6	590.8	620.8	653.3	649.4	615.2	618.8	0.0
1953	612.6	621.7	607.8	627.2	646.7	481.4	656.2	655.5	658.2	639.9	625.1	618.1	0.0
1954	626.2	621.7	623.5	607.5	642.6	630.0	649.4	661.0	658.9	652.1	650.4	629.0	0.0
1955	632.4	628.9	626.2	615.9	660.3	652.5	659.6	661.0	659.6	656.9	630.0	618.1	0.0
1956	629.7	629.7	611.3	648.3	647.4	610.3	652.1	654.2	652.5	646.0	621.6	623.5	0.0
1957	626.9	623.8	620.1	633.5	457.3	-550.2	269.2	637.2	635.6	627.6	588.5	602.4	0.0
1958	619.4	622.4	622.8	596.9	391.2	486.4	594.9	639.9	650.4	649.4	613.8	615.3	0.0
1959	622.8	621.7	610.6	613.1	637.8	623.7	647.4	658.3	657.5	631.7	622.3	623.5	0.0
1960	626.2	632.6	607.2	636.4	661.0	659.6	661.0	661.0	658.2	653.5	632.8	638.5	0.0
1961	639.9	633.3	612.6	659.6	661.0	592.7	651.5	658.3	597.6	614.0	594.8	624.2	0.0
1962	626.9	561.9	584.7	533.5	631.7	330.0	573.8	618.8	642.0	650.8	618.0	612.6	0.0
1963	639.9	599.1	583.3	623.0	607.2	-424.2	609.2	655.5	632.1	646.0	610.3	621.5	0.0
1964	617.4	621.7	613.3	605.4	567.6	204.7	341.4	648.1	651.8	652.8	637.1	642.6	0.0
1965	640.6	642.8	629.7	575.1	596.9	-64.3	218.1	594.2	563.8	583.3	592.0	603.1	0.0
1966	612.6	621.7	618.1	642.7	661.0	655.4	658.3	656.2	647.6	648.1	609.6	622.8	0.0
1967	632.4	631.1	611.3	641.3	623.5	-158.7	261.0	639.9	638.5	639.9	600.4	621.5	0.0
1968	624.9	601.3	608.5	627.9	650.1	489.9	648.1	595.6	629.3	634.4	619.5	618.8	0.0
1969	618.1	618.8	613.3	584.2	640.6	480.7	592.2	654.2	645.5	632.4	607.5	618.1	0.0
1970	635.1	625.3	616.0	627.2	602.4	454.7	625.6	656.2	644.8	638.5	609.6	617.4	0.0
1971	624.2	620.9	618.1	617.3	595.6	118.1	613.3	644.6	642.7	576.5	597.6	639.2	0.0
1972	631.7	606.4	582.6	615.2	639.2	381.4	647.4	630.3	649.0	626.9	601.8	619.4	0.0
1973	628.3	619.5	573.8	602.6	471.6	576.5	609.2	646.7	528.6	661.0	661.0	661.0	0.0
1974	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
1975	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
AVERAGE	627.4	621.7	607.1	599.2	583.9	373.7	553.5	630.3	628.9	626.5	612.1	621.5	0.0
MEDIAN	626.2	621.7	610.6	608.2	623.5	446.2	609.2	646.0	642.7	633.1	607.5	618.8	0.0

2000

Without Development Level

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/17.

WATER QUALITY-YELLOWSTONE AT BILLINGS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	317.8	321.8	274.4	252.9	146.7	122.0	174.4	275.1	345.8	324.3	343.5	345.4	231.7
1940	336.5	320.5	320.0	290.5	157.2	120.4	195.8	350.9	355.3	295.1	333.1	343.1	242.7
1941	323.3	316.1	325.1	297.0	171.1	122.4	149.6	253.6	218.0	208.7	242.5	269.0	227.3
1942	305.7	297.7	261.2	227.0	150.7	117.7	134.3	237.0	291.1	279.2	277.7	279.1	199.2
1943	310.3	274.5	229.7	198.1	151.0	113.8	97.7	188.3	243.3	269.6	277.6	290.2	170.6
1944	309.8	302.1	292.7	305.5	175.4	116.2	125.5	237.4	249.6	278.7	292.1	333.7	203.3
1945	310.6	308.4	300.0	297.8	192.1	117.6	114.7	202.8	265.0	262.8	269.5	309.0	200.8
1946	301.9	284.5	282.4	231.7	163.4	119.4	156.3	259.9	286.5	258.7	287.4	299.2	212.9
1947	310.0	308.0	283.7	247.0	135.1	117.5	126.8	205.7	259.1	246.5	269.3	279.8	191.1
1948	309.5	295.4	281.3	260.8	135.5	114.0	143.9	220.6	307.0	294.1	306.9	342.7	190.8
1949	322.2	305.4	290.6	282.3	140.7	118.6	161.8	261.0	289.7	272.2	293.7	354.7	211.6
1950	334.9	313.7	284.1	271.7	173.9	116.6	110.5	192.1	251.2	234.6	237.8	250.4	190.8
1951	307.2	281.2	266.0	247.9	143.7	119.4	121.4	177.4	246.0	239.8	251.8	295.7	190.3
1952	309.6	294.7	287.8	215.5	125.4	116.8	146.0	211.5	288.5	306.2	315.9	310.9	192.6
1953	307.5	301.8	310.5	293.3	201.2	117.7	138.1	223.8	307.0	322.0	306.3	305.0	217.7
1954	321.4	297.8	317.8	275.8	147.0	120.7	130.4	224.9	305.5	308.3	308.5	317.4	212.7
1955	317.4	314.9	315.1	259.9	182.8	119.7	156.9	248.5	327.2	310.2	324.3	305.8	229.8
1956	310.2	299.8	258.1	236.9	126.5	115.1	145.3	218.9	288.5	307.7	290.0	301.7	188.9
1957	329.4	300.8	287.9	281.4	139.6	113.6	122.4	222.3	258.6	262.5	272.3	288.3	184.1
1958	312.3	304.5	304.4	285.0	140.0	120.2	174.4	253.6	315.7	325.7	299.9	301.9	221.5
1959	315.5	309.3	292.4	268.2	177.0	114.9	133.9	236.0	297.4	259.7	275.3	288.4	199.9
1960	322.6	302.5	292.7	270.9	189.9	119.9	192.1	265.3	343.1	330.0	313.6	325.3	241.9
1961	317.0	305.3	329.0	369.1	186.8	120.4	204.0	318.5	258.2	242.9	249.0	286.9	239.0
1962	314.2	274.9	273.8	225.2	149.8	116.1	132.2	201.6	251.2	270.3	285.9	293.8	190.4
1963	317.9	273.1	301.6	283.7	151.8	115.7	149.8	248.2	274.9	300.1	298.0	322.9	203.0
1964	314.2	296.9	310.8	274.2	157.6	116.1	118.2	214.3	283.5	306.2	294.7	294.1	196.3
1965	299.9	285.1	295.4	237.9	159.1	114.3	103.7	178.6	216.3	226.7	259.6	283.2	175.3
1966	305.5	289.7	279.2	259.8	149.5	121.8	172.2	257.8	298.0	291.1	286.1	289.3	222.5
1967	303.6	292.3	282.7	282.1	159.7	112.8	98.3	202.6	273.7	246.2	263.0	286.3	175.7
1968	309.2	274.6	267.6	266.2	180.7	114.5	118.8	178.5	209.5	231.5	247.7	282.4	182.7
1969	306.0	286.8	268.5	224.4	139.3	118.7	129.8	230.4	296.8	268.0	279.4	291.4	196.8
1970	311.3	293.9	298.9	283.5	136.9	113.9	125.0	217.8	234.3	285.4	270.0	290.4	182.8
1971	303.7	273.4	282.9	244.0	143.8	113.7	110.7	192.9	219.5	228.8	250.4	282.0	174.2
1972	309.8	281.0	239.0	240.3	156.8	114.9	134.4	190.0	218.9	216.5	241.8	282.3	183.9
1973	303.1	289.7	279.9	242.0	146.5	119.2	152.8	241.7	240.9	241.6	266.9	283.5	204.6
1974	303.4	298.8	292.3	246.4	165.6	112.8	109.6	188.0	249.6	265.4	265.7	297.4	178.2
1975	312.9	309.8	273.9	237.6	143.0	114.9	77.2	180.0	250.9	0.0	1074.0	1052.9	176.4
AVERAGE	312.9	296.8	287.4	262.0	156.3	117.1	138.6	227.2	273.9	264.8	303.3	320.4	200.9
MEDIAN	310.2	297.7	287.8	260.3	151.0	116.8	133.9	222.3	273.7	268.0	277.7	293.8	196.8
80 PERCENTILE	305.5	281.2	268.5	236.9	139.6	114.0	114.7	192.1	240.9	239.8	251.8	282.4	182.8
60 PERCENTILE	309.5	293.9	282.7	247.9	147.0	116.1	126.8	214.3	258.6	261.6	270.0	289.3	190.8
40 PERCENTILE	312.3	300.8	292.4	270.9	157.6	117.7	143.9	236.0	288.5	278.7	287.4	299.2	203.0
20 PERCENTILE	317.9	308.0	304.4	283.7	175.4	119.9	161.8	253.6	305.5	307.7	306.3	317.4	221.5
MAXIMUM	336.5	321.8	329.0	369.1	201.2	122.4	204.0	350.9	355.3	330.0	343.5	354.7	242.7
MINIMUM	299.9	273.1	229.7	198.1	125.4	112.8	97.7	177.4	209.5	208.7	237.8	250.4	170.6

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/17.

WATER QUALITY-TONGUE - MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	826.5	674.7	464.9	624.7	0.0	333.0	0.0	0.0	0.0	595.7	811.4	859.6	590.0
1940	853.9	702.7	614.2	0.0	0.0	465.5	0.0	0.0	0.0	527.1	868.6	953.7	710.5
1941	860.9	725.7	692.8	0.0	635.7	357.6	0.0	0.0	513.2	461.9	519.8	657.8	584.2
1942	783.6	695.2	501.4	597.2	494.5	284.7	0.0	0.0	1126.0	477.1	534.4	657.8	519.1
1943	749.7	553.8	439.5	475.6	474.0	276.1	0.0	0.0	1126.0	541.9	540.9	681.7	485.1
1944	780.8	732.0	470.5	567.6	417.1	213.6	218.0	0.0	0.0	558.9	520.9	669.4	433.9
1945	743.6	671.8	507.5	607.0	562.5	262.5	322.8	0.0	701.9	495.8	536.5	702.0	494.8
1946	700.5	636.7	429.1	558.9	496.9	278.3	374.6	0.0	487.3	432.4	523.8	635.8	478.5
1947	529.8	562.2	373.1	516.1	416.7	303.2	325.3	0.0	984.4	541.1	549.8	674.2	460.6
1948	692.9	580.6	439.9	526.6	440.3	301.4	276.7	0.0	0.0	530.6	526.8	800.9	478.8
1949	789.3	728.9	380.1	568.0	475.6	329.8	0.0	0.0	0.0	612.9	554.3	597.0	512.6
1950	774.5	692.3	527.6	589.2	528.0	399.0	647.8	0.0	582.1	513.3	567.9	747.4	577.0
1951	725.6	639.4	583.3	655.7	546.4	417.5	458.6	802.7	491.9	519.0	532.4	777.5	569.9
1952	815.4	681.9	483.6	454.3	445.6	341.9	0.0	0.0	0.0	516.5	646.7	756.9	513.5
1953	759.9	686.4	589.6	738.0	565.2	286.4	0.0	0.0	0.0	554.4	572.7	766.9	561.4
1954	764.0	612.6	582.3	662.7	706.0	703.0	0.0	0.0	0.0	756.1	675.7	756.9	681.0
1955	795.8	736.7	565.0	576.7	472.2	321.8	497.2	0.0	0.0	0.0	791.3	836.8	571.0
1956	787.2	686.4	489.8	504.7	508.1	340.6	0.0	0.0	0.0	761.3	618.1	736.6	552.3
1957	824.3	705.8	575.6	600.9	546.4	274.1	413.0	0.0	536.7	556.2	729.1	816.6	536.2
1958	778.7	681.9	580.4	677.3	533.4	405.9	421.5	0.0	0.0	575.7	641.0	718.5	602.7
1959	739.6	664.6	373.0	557.8	557.4	501.1	0.0	0.0	689.8	678.1	724.4	753.0	558.3
1960	747.6	660.3	434.1	612.4	0.0	0.0	0.0	0.0	0.0	0.0	920.5	1187.8	649.0
1961	901.5	739.9	875.8	0.0	0.0	0.0	0.0	0.0	0.0	751.1	1010.6	877.9	869.4
1962	817.6	602.1	472.1	582.7	477.0	267.6	522.9	0.0	616.7	563.6	682.0	803.4	508.9
1963	822.1	346.0	494.4	658.6	417.1	238.6	574.5	0.0	694.2	0.0	983.3	1167.0	489.3
1964	808.8	666.0	602.3	622.7	472.0	252.2	313.6	774.9	544.7	582.2	690.5	803.4	502.3
1965	708.1	469.4	464.9	439.5	453.8	309.8	354.2	0.0	517.2	448.5	598.4	779.7	469.3
1966	806.6	702.7	566.7	735.7	0.0	0.0	0.0	0.0	0.0	0.0	938.9	972.4	763.3
1967	791.4	629.9	539.6	607.6	504.7	221.3	285.4	0.0	519.3	574.6	603.2	724.9	471.0
1968	642.3	432.7	438.0	576.7	525.9	243.1	367.1	383.7	425.2	459.5	610.8	769.0	460.1
1969	733.6	644.9	370.7	487.1	440.5	361.4	312.8	0.0	684.2	596.5	780.5	741.9	486.1
1970	721.7	608.6	508.0	544.7	407.7	244.3	420.8	0.0	622.7	554.4	627.9	760.8	474.0
1971	753.7	98.2	354.5	493.9	434.1	286.9	0.0	0.0	507.9	427.6	590.1	749.0	439.1
1972	780.8	542.2	368.5	497.1	476.6	305.6	514.2	788.0	555.1	507.9	598.4	813.9	483.8
1973	698.6	598.3	552.5	618.7	417.0	272.8	459.7	0.0	474.6	478.0	574.6	825.0	492.2
1974	512.8	583.2	542.8	607.0	476.1	312.4	494.4	0.0	838.8	578.9	618.1	647.8	530.7
1975	450.2	674.7	414.6	510.2	391.5	242.2	186.3	330.7	539.3	0.0	0.0	0.0	424.3
AVERAGE	749.6	623.0	504.4	530.1	424.8	296.1	236.8	83.2	400.5	475.9	644.2	762.5	540.2
MEDIAN	764.0	660.3	494.4	568.0	474.0	286.9	285.4	0.0	487.3	530.6	610.8	760.8	512.6
80 PERCENTILE	708.1	562.2	429.1	487.1	416.7	243.1	0.0	0.0	0.0	435.8	536.5	674.2	474.0
60 PERCENTILE	747.6	629.9	470.5	544.7	445.6	276.1	0.0	0.0	0.0	513.3	590.1	747.4	492.2
40 PERCENTILE	780.8	674.7	527.6	597.2	477.0	309.8	325.3	0.0	536.7	554.4	641.0	777.5	538.2
20 PERCENTILE	815.4	702.7	580.4	622.7	533.4	357.6	458.6	0.0	684.2	578.9	780.5	825.0	584.2
MAXIMUM	901.5	739.9	875.8	738.0	706.0	703.0	647.8	802.7	1126.0	761.3	1010.6	1187.8	869.4
MINIMUM	512.8	98.2	354.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	519.8	597.0	433.9

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/17.

WATER QUALITY-YELLOWSTONE-MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	559.9	567.1	499.3	565.5	359.5	212.7	292.4	483.4	568.9	532.2	577.7	607.5	477.6
1940	676.6	568.2	554.2	583.3	384.5	214.5	316.4	612.1	586.3	502.0	597.7	612.9	505.2
1941	690.6	576.7	555.2	583.0	386.1	206.2	303.8	431.0	373.3	377.8	485.5	491.8	459.7
1942	514.1	481.1	441.2	521.9	315.7	234.8	259.9	410.9	508.0	486.7	489.9	541.7	410.1
1943	541.6	439.8	396.1	451.5	317.0	264.4	230.0	333.3	449.3	476.5	481.5	526.2	356.8
1944	535.0	511.3	443.5	542.1	349.7	267.5	243.4	395.1	478.4	490.3	500.8	547.8	390.3
1945	537.3	506.1	467.0	582.9	407.5	231.9	240.8	355.9	461.4	435.1	464.2	546.4	408.1
1946	508.1	484.9	469.4	547.3	373.5	221.5	280.4	432.6	463.2	444.6	480.8	547.5	434.4
1947	575.7	530.9	455.7	501.3	254.1	233.9	244.7	366.8	463.7	432.5	460.6	500.6	389.7
1948	517.2	488.4	439.9	539.9	302.3	260.4	256.9	395.5	528.5	502.5	498.0	618.3	399.7
1949	602.9	525.6	447.3	540.3	320.9	223.8	278.1	449.3	499.2	488.4	496.6	602.5	438.7
1950	585.6	513.3	429.9	528.5	392.6	231.5	242.7	336.1	482.4	406.7	444.5	473.1	396.2
1951	518.0	479.4	433.0	539.3	326.5	222.6	245.1	309.0	416.0	420.4	441.8	501.7	389.8
1952	521.1	482.0	437.8	490.8	238.5	234.7	268.5	384.0	499.2	511.5	532.0	580.4	404.7
1953	536.7	516.5	511.7	585.8	426.7	231.8	270.2	418.9	541.4	548.0	537.7	588.6	454.1
1954	577.7	499.9	530.7	579.3	338.3	206.9	262.9	419.2	544.1	540.1	546.9	604.3	457.6
1955	592.4	537.4	562.6	537.4	391.0	215.8	282.5	469.7	563.7	583.6	580.6	540.8	475.4
1956	546.8	511.4	452.1	522.8	265.2	251.2	270.4	407.5	505.7	531.3	500.0	570.3	407.6
1957	577.9	514.7	493.4	523.6	277.0	270.5	246.0	392.2	445.4	465.9	470.4	517.4	381.6
1958	533.6	500.3	498.3	580.4	322.4	218.2	286.9	451.8	534.8	541.9	537.6	573.6	454.8
1959	562.3	522.3	414.8	567.4	401.3	237.0	268.2	446.5	526.5	490.6	523.1	548.0	433.9
1960	576.7	512.8	470.5	571.6	426.4	209.5	315.6	505.7	561.3	570.4	543.4	616.8	495.0
1961	610.3	550.1	592.3	635.7	446.2	209.6	337.5	619.5	485.5	454.6	464.0	580.0	509.4
1962	592.8	491.0	497.1	524.1	323.1	243.9	254.0	372.6	447.4	447.2	501.7	541.1	404.8
1963	547.1	454.2	491.7	560.4	316.6	246.9	269.9	440.1	476.7	520.4	508.7	579.0	417.9
1964	539.5	496.2	526.2	545.4	329.6	247.5	282.9	386.4	476.7	515.0	509.5	547.9	401.8
1965	500.6	472.5	474.2	455.5	307.9	256.8	232.4	318.7	384.0	399.4	502.0	524.2	360.0
1966	554.6	513.2	471.3	574.1	378.6	204.0	301.7	510.1	558.5	560.6	526.9	538.6	481.8
1967	548.3	530.0	542.2	552.9	353.1	258.3	225.2	359.7	465.6	455.0	464.0	473.7	378.2
1968	469.2	428.3	437.1	553.9	388.3	255.5	249.5	331.8	387.4	416.0	447.8	509.6	378.4
1969	497.4	475.9	400.6	525.5	306.1	217.1	255.2	384.5	493.6	483.1	501.2	490.9	406.9
1970	503.2	471.4	510.4	575.9	279.4	256.0	246.4	387.1	464.6	461.6	477.9	504.7	388.4
1971	488.1	377.7	401.7	457.4	273.2	257.9	244.6	384.6	419.1	378.8	429.0	468.0	351.9
1972	504.1	457.6	354.3	502.3	321.3	243.9	261.7	354.6	426.4	402.5	413.0	538.3	379.4
1973	492.1	458.2	470.0	530.4	287.0	225.5	272.9	388.1	427.9	424.7	395.0	453.1	401.6
1974	495.4	465.8	464.3	502.6	345.9	244.4	240.1	389.5	486.3	456.1	430.6	490.2	372.2
1975	488.0	472.5	428.8	511.1	251.4	246.9	272.0	307.4	463.5	-25.7	-25.7	-25.7	378.0
AVERAGE	545.9	496.9	472.0	540.3	337.5	236.1	263.9	406.8	480.9	462.4	478.6	528.4	417.1
MEDIAN	539.5	499.9	469.4	540.3	328.5	233.9	259.9	392.2	476.7	476.5	498.0	541.7	404.8
90 PERCENTILE	503.2	465.8	433.0	502.6	287.0	214.5	242.9	349.5	427.9	420.4	465.5	491.8	379.4
60 PERCENTILE	533.6	484.9	452.1	530.4	320.9	225.5	249.5	384.5	463.2	456.1	477.9	526.2	399.7
40 PERCENTILE	554.6	511.4	474.2	552.9	349.7	243.9	268.5	410.9	493.6	490.3	501.2	548.0	410.1
20 PERCENTILE	577.9	525.6	511.7	575.9	388.3	256.8	282.5	449.3	534.8	531.3	532.0	587.8	457.6
MAXIMUM	676.6	576.7	592.3	635.7	446.2	270.5	337.5	619.5	586.3	570.4	597.7	618.3	509.4
MINIMUM	469.2	377.7	354.3	451.5	238.5	204.0	225.2	309.0	373.3	377.8	395.0	453.1	351.9

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/09/17.

WATER QUALITY-YELLOWSTONE AT SIDNEY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	624.1	627.7	488.1	626.9	418.6	240.3	345.5	610.3	659.0	624.2	681.8	677.4	585.6
1940	767.4	628.8	613.6	632.4	452.5	246.2	373.2	883.9	675.6	529.0	684.2	681.0	575.3
1941	738.8	637.0	607.5	629.3	437.5	239.7	353.5	882.7	613.3	621.1	506.3	585.3	513.8
1942	585.1	535.6	453.5	588.8	386.6	265.3	306.3	493.7	595.2	555.3	549.2	650.6	473.2
1943	607.4	451.6	398.2	485.5	384.6	293.1	268.3	393.5	535.6	566.7	552.2	598.8	405.0
1944	604.1	567.0	627.4	540.4	400.7	311.0	284.6	469.0	569.4	563.4	571.0	664.7	432.6
1945	602.7	567.0	681.3	630.0	470.4	259.5	281.4	428.4	542.5	505.1	538.4	643.0	469.6
1946	566.9	536.9	495.6	615.3	444.7	249.8	323.4	541.1	533.1	485.0	526.1	592.4	497.0
1947	625.8	558.5	404.9	539.1	313.6	261.0	288.0	441.9	553.9	502.2	521.0	573.4	439.9
1948	585.6	548.1	474.4	581.5	397.1	294.0	298.1	475.0	628.3	579.6	564.9	701.8	459.7
1949	667.2	595.1	495.9	584.4	410.6	252.7	325.7	559.9	597.9	573.4	571.7	677.4	511.4
1950	666.9	568.4	492.9	574.5	457.9	259.8	289.1	414.5	535.7	493.2	543.8	558.0	463.0
1951	582.4	544.3	506.1	566.0	427.4	248.1	292.0	379.1	490.5	500.1	507.0	642.9	464.0
1952	583.7	519.5	481.8	429.0	321.7	264.0	317.0	474.0	594.8	610.8	615.9	657.9	459.4
1953	611.0	575.3	571.0	651.0	495.1	264.7	318.1	512.3	638.2	641.3	618.6	677.5	525.9
1954	685.5	535.8	586.1	612.8	410.5	232.9	308.0	492.8	617.6	624.9	620.3	673.1	527.6
1955	688.9	603.2	621.4	568.4	447.2	244.1	326.1	585.6	663.1	626.8	660.9	677.9	546.5
1956	609.3	582.2	477.5	575.9	382.2	279.4	317.1	495.1	590.4	619.6	568.7	635.3	474.3
1957	636.0	587.3	529.1	581.6	372.0	296.7	290.2	483.2	544.8	551.1	547.0	603.1	450.8
1958	605.6	585.1	531.9	630.4	415.2	247.0	330.6	573.7	628.6	620.0	614.4	659.4	529.7
1959	641.3	589.9	599.7	621.1	468.5	260.8	312.6	570.5	620.8	570.4	620.0	630.0	498.9
1960	658.7	564.5	458.8	623.2	492.9	236.4	377.6	674.5	659.1	663.8	624.0	704.2	567.3
1961	672.0	615.0	627.2	694.2	525.7	239.1	419.4	0.0	575.3	528.0	546.7	670.7	593.6
1962	652.0	525.9	528.5	574.2	364.7	283.0	288.2	442.7	583.5	525.3	560.8	604.3	449.7
1963	613.0	490.2	508.1	616.0	359.9	291.0	310.1	539.6	556.8	594.2	574.9	663.1	464.6
1964	597.1	548.5	572.1	599.8	395.3	282.0	281.3	455.6	545.6	589.8	580.2	652.9	458.0
1965	569.0	534.9	522.7	485.6	358.0	294.2	266.5	381.5	476.7	461.9	570.5	586.9	404.3
1966	603.3	562.0	498.3	637.4	459.0	272.0	354.9	638.4	649.0	623.4	599.2	599.1	553.7
1967	645.0	590.5	582.8	597.8	406.4	292.5	264.1	421.3	537.2	509.2	525.7	563.7	432.2
1968	522.9	497.6	448.8	608.8	455.2	286.6	292.6	480.9	452.2	478.6	496.5	561.4	434.4
1969	556.7	532.1	413.6	560.1	384.4	244.9	295.4	475.3	586.5	555.1	562.0	561.1	465.5
1970	566.9	516.1	530.4	622.6	343.9	286.7	290.0	469.7	553.6	535.0	544.7	554.9	447.1
1971	542.1	425.1	403.7	505.7	345.0	293.3	285.6	420.9	494.9	485.9	487.2	575.0	401.3
1972	569.0	499.3	350.7	560.0	381.8	274.6	306.8	431.5	507.9	469.3	473.3	593.8	431.5
1973	585.7	512.2	499.5	576.7	342.1	260.3	319.3	475.0	485.7	479.4	474.6	535.7	457.5
1974	559.5	522.6	520.1	558.2	410.4	288.7	281.7	425.3	522.2	512.8	491.6	551.2	434.3
1975	551.9	550.5	466.6	551.4	286.9	280.0	260.8	370.4	525.5	2048.8	1714.3	861.7	429.9
AVERAGE	613.7	552.8	499.2	582.3	405.3	266.9	309.3	479.5	564.9	587.7	593.8	628.7	478.1
MEDIAN	605.6	556.9	495.9	584.4	406.4	261.0	306.3	475.0	553.9	551.1	560.8	630.0	464.0
80 PERCENTILE	566.9	518.1	427.4	540.4	359.9	244.1	284.6	420.9	507.9	485.0	507.0	561.4	434.3
60 PERCENTILE	597.1	535.8	481.8	575.9	386.6	259.5	292.0	455.6	543.5	525.3	546.7	598.8	458.0
40 PERCENTILE	613.0	567.0	508.1	608.8	415.2	274.6	312.6	483.2	586.5	566.7	570.5	650.6	473.2
20 PERCENTILE	654.7	589.9	571.0	626.9	455.2	291.0	326.1	559.9	628.3	619.6	615.9	673.1	527.6
MAXIMUM	767.4	637.0	627.2	694.2	525.7	311.0	419.4	883.9	675.8	643.8	684.2	704.2	593.6
MINIMUM	522.9	425.1	350.7	429.0	313.6	232.0	264.1	0.0	413.3	405.9	473.3	535.7	401.3

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/16.

WATER QUALITY OF GREYBULL RIVER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	540.8	554.7	565.0	575.5	574.9	568.8	586.0	563.7	565.6	567.8	565.5	565.1	0.0
1940	565.3	551.8	570.2	575.5	583.9	578.0	563.7	563.7	565.6	573.4	565.5	565.1	0.0
1941	572.5	572.2	572.6	583.9	583.5	577.6	563.7	563.7	565.6	561.3	523.8	525.3	0.0
1942	526.6	553.3	571.7	575.5	575.7	569.6	516.0	563.7	565.6	573.4	565.5	565.1	0.0
1943	572.9	565.9	564.9	575.5	493.6	484.8	410.0	563.7	565.6	560.0	563.1	564.0	0.0
1944	565.3	553.4	572.6	580.6	586.8	581.5	533.8	563.7	565.6	573.4	565.5	565.1	0.0
1945	573.2	572.2	572.6	582.7	586.6	586.8	471.6	563.7	565.6	561.7	564.9	565.1	0.0
1946	567.6	552.2	568.2	575.5	572.0	565.7	558.3	563.7	565.6	571.3	565.5	565.1	0.0
1947	572.6	556.6	572.6	575.5	560.7	554.0	480.8	563.7	565.6	560.2	563.3	564.2	0.0
1948	565.5	551.1	572.3	575.5	532.6	525.0	563.7	563.7	565.6	573.4	565.5	565.1	0.0
1949	572.5	572.2	572.6	578.4	554.9	548.0	563.7	563.7	565.6	573.4	565.5	565.1	0.0
1950	572.5	572.2	572.6	579.1	575.6	569.3	465.8	563.7	565.6	553.5	536.4	537.5	0.0
1951	538.8	548.5	570.8	575.5	539.7	532.4	434.3	563.7	565.6	563.0	535.9	537.0	0.0
1952	538.3	552.9	572.6	575.5	535.4	528.0	560.6	563.7	565.6	573.2	565.5	565.1	0.0
1953	572.4	562.7	570.5	575.5	585.3	579.4	530.7	563.7	565.6	573.4	565.5	565.1	0.0
1954	572.0	563.8	572.6	575.5	565.7	559.2	516.7	563.7	565.6	573.4	565.5	565.1	0.0
1955	572.5	572.2	572.6	584.1	586.8	586.8	563.7	563.7	565.6	573.4	565.5	565.1	0.0
1956	572.5	572.2	567.9	575.5	478.9	469.6	537.5	563.7	565.6	571.8	565.5	565.1	0.0
1957	573.4	558.0	572.6	576.4	511.1	502.7	501.0	563.7	565.6	565.0	565.5	565.1	0.0
1958	556.8	553.0	572.6	578.6	550.1	543.2	563.7	563.7	565.6	573.4	565.5	565.1	0.0
1959	572.5	572.2	572.6	584.1	564.6	558.0	552.1	563.7	565.6	569.7	565.5	565.1	0.0
1960	570.9	557.9	562.9	575.5	586.8	586.8	563.7	563.7	565.6	573.4	565.5	565.1	0.0
1961	572.5	572.2	572.6	584.1	586.8	586.8	563.7	563.7	565.6	572.4	565.5	565.1	0.0
1962	570.1	557.9	570.0	575.5	539.4	532.1	522.8	563.7	565.6	567.3	565.5	565.1	0.0
1963	563.7	548.3	571.5	575.5	526.1	518.3	563.6	563.7	565.6	571.5	565.5	565.1	0.0
1964	570.2	557.0	571.8	576.4	549.4	563.0	463.2	563.7	565.6	570.5	565.5	565.1	0.0
1965	568.5	556.0	569.8	575.5	510.6	502.2	430.2	563.7	565.6	551.3	534.1	535.3	0.0
1966	536.6	552.7	564.1	575.5	586.8	586.8	563.7	563.7	565.6	573.4	565.5	565.1	0.0
1967	570.4	565.9	570.0	579.8	521.2	513.1	493.9	563.7	565.6	566.2	565.5	565.1	0.0
1968	560.4	549.8	566.1	581.5	585.6	579.7	533.7	563.7	565.6	558.2	561.2	562.2	0.0
1969	563.5	549.9	568.9	575.5	568.0	561.7	563.3	563.7	565.6	570.6	565.5	565.1	0.0
1970	570.3	554.2	570.9	582.1	515.6	507.3	518.5	563.7	565.6	565.5	565.5	565.1	0.0
1971	558.4	550.5	571.1	575.5	496.8	487.9	460.2	563.7	565.6	557.6	560.6	561.6	0.0
1972	562.9	562.7	563.8	575.5	586.8	586.8	563.7	563.7	565.6	566.5	565.5	565.1	0.0
1973	561.2	549.7	559.9	575.5	538.0	530.5	581.9	563.7	565.6	567.4	560.4	561.4	0.0
1974	562.6	550.6	568.9	575.5	477.5	467.8	486.3	563.7	565.6	565.9	565.5	565.1	0.0
1975	559.5	555.5	565.7	579.1	586.8	586.8	383.2	563.7	565.6	573.4	565.5	565.1	0.0
AVERAGE	560.5	556.8	569.8	577.6	553.5	547.7	517.6	563.7	565.6	566.8	563.6	563.6	0.0
MEDIAN	568.5	556.0	570.9	575.5	564.6	558.0	533.8	563.7	565.6	569.7	565.5	565.1	0.0
80 PERCENTILE	562.9	550.6	567.9	575.5	515.6	507.3	465.8	563.7	565.6	558.2	561.2	562.2	0.0
60 PERCENTILE	560.4	553.3	570.0	575.5	539.7	532.4	518.5	563.7	565.6	566.2	565.5	565.1	0.0
40 PERCENTILE	570.4	557.9	571.8	575.5	572.0	565.7	546.0	563.7	565.6	571.5	565.5	565.1	0.0
20 PERCENTILE	572.5	572.2	572.6	580.6	585.6	579.7	563.7	563.7	565.6	573.4	565.5	565.1	0.0
MAXIMUM	573.4	572.2	572.6	584.1	586.8	586.8	563.7	563.7	565.6	573.4	565.5	565.1	0.0
MINIMUM	526.6	548.3	559.9	575.5	477.3	467.8	410.0	563.7	565.6	561.3	523.8	525.3	0.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 WITHOUT DEVELOPMENT LEVEL

78/02/16.

WATER QUALITY OF SHOSHONE RIVER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	619.4	624.6	582.6	620.9	647.4	645.5	661.0	661.0	661.0	659.6	656.1	622.8	0.0
1940	634.4	636.9	624.2	640.6	660.9	628.6	652.8	661.0	653.3	634.4	615.2	612.6	0.0
1941	630.3	632.6	620.8	582.8	542.4	400.0	552.7	400.0	400.0	453.9	537.1	601.7	0.0
1942	629.7	614.4	591.5	537.1	400.0	400.0	577.2	646.0	634.2	618.1	604.0	620.1	0.0
1943	618.1	610.0	556.7	472.3	544.5	400.0	400.0	618.8	637.8	633.1	596.2	606.5	0.0
1944	618.1	615.1	607.8	567.3	400.0	400.0	498.6	645.3	654.0	631.7	607.5	618.8	0.0
1945	616.7	616.6	583.3	599.0	618.1	400.0	400.0	579.9	596.9	607.2	590.6	599.0	0.0
1946	605.1	610.0	586.7	571.6	639.2	544.1	616.7	646.7	565.9	562.9	582.8	614.0	0.0
1947	615.8	623.8	605.8	545.2	510.4	400.0	400.0	617.4	634.2	613.3	581.4	611.3	0.0
1948	618.8	617.3	576.5	527.9	565.6	400.0	557.4	639.2	635.6	621.5	602.6	611.9	0.0
1949	620.1	625.3	577.9	583.5	635.1	446.2	628.3	654.2	655.4	628.3	606.1	629.0	0.0
1950	631.7	615.8	613.3	616.6	639.2	620.9	620.8	623.5	612.4	597.6	590.6	599.0	0.0
1951	621.5	623.1	615.3	608.2	625.6	442.0	400.0	576.5	630.0	584.7	597.6	617.4	0.0
1952	622.2	617.3	601.7	420.2	400.0	400.0	590.6	620.8	653.3	649.4	615.2	618.8	0.0
1953	612.6	621.7	607.8	627.2	646.7	481.4	656.2	655.5	658.2	639.9	625.1	618.1	0.0
1954	626.2	621.7	623.5	607.5	642.6	630.0	649.4	661.0	658.9	652.1	650.4	629.0	0.0
1955	632.4	628.9	626.2	615.9	660.3	652.5	659.6	661.0	659.6	656.9	630.0	618.1	0.0
1956	629.7	629.7	611.3	648.3	647.4	610.3	652.1	654.2	652.5	646.0	621.6	623.5	0.0
1957	626.9	623.8	620.1	653.5	647.3	400.0	400.0	637.2	635.6	627.6	588.5	602.4	0.0
1958	619.4	622.4	622.8	596.9	400.0	486.4	594.9	639.9	650.4	649.4	613.8	615.3	0.0
1959	622.8	621.7	610.6	613.1	637.8	623.7	647.4	658.3	657.5	631.7	622.3	623.5	0.0
1960	626.2	632.6	607.2	636.4	661.0	659.6	661.0	661.0	658.2	653.5	632.8	638.5	0.0
1961	639.9	633.3	612.6	659.6	661.0	592.7	651.5	658.3	597.6	614.0	594.8	624.2	0.0
1962	626.9	561.9	584.7	533.5	651.7	400.0	573.8	618.8	642.0	650.8	618.0	612.6	0.0
1963	639.9	599.1	583.3	623.0	607.2	480.0	609.2	655.5	632.1	646.0	610.3	621.5	0.0
1964	617.4	621.7	613.3	605.4	567.6	400.0	400.0	648.1	651.8	652.8	637.1	642.6	0.0
1965	640.6	642.8	629.7	575.1	596.9	400.0	400.0	594.2	563.8	583.3	592.0	603.1	0.0
1966	612.6	621.7	618.1	642.7	661.0	655.4	658.3	656.2	647.6	648.1	609.6	622.8	0.0
1967	632.4	631.1	611.3	641.3	623.5	400.0	400.0	639.9	638.5	639.9	600.4	621.5	0.0
1968	624.9	601.3	608.5	627.9	650.1	489.9	648.1	595.6	629.3	634.4	619.5	618.8	0.0
1969	618.1	618.8	613.3	584.2	640.6	480.7	592.2	654.2	645.5	632.4	607.5	618.1	0.0
1970	635.1	625.3	616.0	627.2	602.4	454.7	625.6	656.2	644.8	638.5	609.6	617.4	0.0
1971	624.2	620.9	618.1	617.3	595.6	400.0	613.3	644.6	642.7	576.5	597.6	639.2	0.0
1972	631.7	606.4	582.6	615.2	639.2	400.0	647.4	630.3	649.0	626.9	601.8	619.4	0.0
1973	628.3	619.5	573.8	602.6	471.6	576.5	609.2	646.7	528.6	661.0	661.0	661.0	0.0
1974	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
1975	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
AVERAGE	627.4	621.7	607.1	599.2	597.9	498.5	572.6	633.5	629.5	626.5	612.1	621.5	0.0
MEDIAN	626.2	621.7	610.6	608.2	623.5	446.2	609.2	646.0	642.7	633.1	607.5	618.8	0.0
80 PERCENTILE	618.1	614.4	583.3	567.3	510.4	400.0	400.0	618.8	612.4	607.2	592.0	611.3	0.0
60 PERCENTILE	622.2	619.5	607.2	599.0	596.9	400.0	590.8	639.9	635.6	628.3	602.6	617.4	0.0
40 PERCENTILE	628.3	623.1	613.3	616.6	637.8	496.4	625.6	654.2	649.0	639.9	613.8	620.1	0.0
20 PERCENTILE	632.4	628.9	620.1	643.5	647.4	623.7	652.1	658.3	655.4	650.8	625.1	624.2	0.0
MAXIMUM	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
MINIMUM	605.1	561.9	556.7	420.2	400.0	400.0	400.0	400.0	400.0	453.9	537.1	599.0	0.0

78/02/16.

1985

Recommended Development Level

BLANK PAGE

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 RECOMEND DEVELOPMENT LEVEL

78/02/17.

WATER QUALITY-YELLOWSTONE AT BILLINGS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	317.4	321.5	274.4	252.5	144.4	121.9	173.5	272.1	343.1	323.7	343.9	345.7	230.9
1940	336.6	320.5	310.9	290.0	156.7	120.3	194.5	343.4	352.4	294.6	333.5	343.3	241.8
1941	323.3	316.1	325.1	295.4	170.5	122.4	188.4	251.4	217.1	208.5	242.7	269.1	226.5
1942	305.7	297.7	281.1	228.9	150.3	117.7	133.8	235.3	289.5	278.8	278.0	279.3	198.7
1943	310.3	274.5	223.7	198.0	150.6	119.9	97.4	187.6	242.2	289.3	277.8	290.4	170.3
1944	309.8	302.2	292.0	304.9	174.7	116.2	125.1	235.7	268.3	278.4	292.4	333.9	202.8
1945	310.6	308.4	308.0	297.2	181.6	117.9	114.4	201.8	283.7	282.9	289.7	309.2	200.3
1946	301.9	286.5	282.4	231.5	162.9	119.3	155.6	257.4	284.9	258.4	287.6	299.4	212.3
1947	310.1	308.0	284.7	240.8	134.9	117.5	120.4	204.7	257.9	246.2	269.5	280.0	190.7
1948	309.5	295.4	281.2	240.4	135.2	114.0	143.3	219.3	305.2	293.7	307.2	343.0	190.4
1949	322.2	305.5	290.5	242.0	140.4	118.6	161.1	258.5	288.1	271.9	293.9	355.0	211.0
1950	334.9	313.7	298.4	271.4	173.3	119.4	110.2	191.4	250.0	234.3	238.0	250.5	190.3
1951	307.2	281.2	264.0	247.6	148.3	119.3	121.0	176.8	244.9	239.6	252.0	295.9	189.9
1952	309.6	294.7	297.9	215.3	125.2	116.7	145.4	210.4	287.0	305.7	316.2	311.1	192.2
1953	307.6	301.8	310.5	292.7	208.3	117.6	137.4	222.5	305.2	321.4	306.6	305.2	217.0
1954	321.4	297.8	317.7	275.3	146.6	120.6	130.0	223.5	303.7	307.8	308.8	317.6	212.1
1955	317.5	318.0	314.1	290.5	142.1	119.6	156.3	248.4	325.0	309.7	324.6	305.9	229.0
1956	310.3	299.8	294.0	236.6	126.2	115.1	144.9	217.6	286.9	307.2	290.3	301.9	188.5
1957	329.6	300.8	287.9	281.0	139.3	113.6	122.0	221.0	257.4	262.2	272.6	280.5	183.8
1958	312.3	304.5	304.6	284.5	139.7	120.1	173.5	251.4	313.7	325.1	300.2	302.1	220.9
1959	315.5	309.3	292.4	267.5	179.4	114.9	133.5	234.3	295.7	259.4	275.6	288.6	199.4
1960	329.7	308.5	297.0	270.5	149.1	119.8	140.9	242.7	340.4	329.3	313.9	325.5	241.0
1961	317.1	305.3	324.9	347.7	186.1	120.3	202.5	313.3	257.0	242.6	249.2	287.0	238.1
1962	314.3	274.9	273.7	225.0	149.4	116.8	131.8	200.7	256.0	269.9	286.2	293.9	198.0
1963	317.9	273.1	301.6	283.2	151.4	115.7	149.2	246.2	273.4	299.6	298.2	323.1	202.4
1964	314.2	296.9	310.7	273.8	157.1	114.1	117.8	213.1	282.0	307.7	295.0	294.2	195.8
1965	299.9	285.1	295.4	237.4	156.4	114.3	103.5	174.0	219.4	226.5	259.8	283.4	174.9
1966	305.5	289.7	279.2	259.6	149.1	121.7	171.4	255.4	296.3	290.6	286.3	289.4	221.8
1967	303.7	292.3	282.7	281.4	154.2	112.8	98.0	201.7	272.7	246.0	263.2	286.4	175.4
1968	309.3	274.4	267.8	265.4	148.0	114.5	118.4	177.0	208.7	231.2	247.9	282.6	182.3
1969	308.1	286.8	284.5	224.2	139.9	118.6	129.4	228.9	295.0	267.7	279.7	291.5	196.3
1970	311.4	293.9	292.9	243.9	134.4	119.9	124.6	216.9	233.4	245.1	270.3	290.6	182.4
1971	303.7	273.5	282.8	243.7	143.5	113.7	110.4	192.1	218.7	228.6	250.6	282.2	173.9
1972	309.8	281.9	284.0	246.0	156.3	114.9	133.9	189.2	218.1	216.4	242.0	282.5	183.5
1973	303.2	289.7	279.9	241.7	144.1	119.1	152.1	239.9	239.9	261.3	267.1	283.6	204.1
1974	303.4	298.8	292.2	246.2	165.0	112.8	109.3	187.3	248.5	265.1	265.9	297.6	177.8
1975	313.0	300.9	274.9	237.9	142.7	114.9	77.0	179.4	249.8	10467.1	1114.2	1084.3	176.1
AVERAGE	312.9	296.8	287.6	261.5	155.8	117.1	138.1	225.5	272.4	547.4	304.6	321.4	200.4
MEDIAN	310.3	297.7	287.9	260.0	150.6	116.7	133.5	221.0	272.3	267.7	278.0	293.9	196.3
80 PERCENTILE	305.5	281.2	264.0	236.6	134.3	114.0	114.4	191.4	239.9	239.6	252.0	282.6	182.4
60 PERCENTILE	309.6	293.4	292.7	247.6	146.6	116.0	126.4	213.1	257.4	261.3	270.3	289.4	190.4
40 PERCENTILE	312.3	300.8	292.4	270.5	157.1	117.7	143.4	236.3	286.9	278.4	287.6	299.4	202.4
20 PERCENTILE	317.3	308.0	304.6	283.2	174.7	119.9	161.1	251.4	303.7	307.2	306.6	317.6	220.9
MAXIMUM	336.6	321.9	325.9	347.7	208.3	122.4	202.5	343.4	352.4	329.3	343.9	355.0	241.8
MINIMUM	299.9	273.1	224.7	198.0	125.2	112.8	97.4	176.8	208.7	208.5	238.0	250.5	170.3

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 RECOMEND DEVELOPMENT LEVEL

78/02/17.

WATER QUALITY-TONGUE - MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	743.3	626.3	654.1	600.4	0.0	323.9	0.0	0.0	0.0	510.7	703.7	760.4	564.3
1940	767.8	652.6	570.5	730.5	872.7	427.3	753.6	0.0	0.0	503.6	727.1	808.0	649.2
1941	774.1	673.4	612.1	748.0	573.4	345.4	0.0	0.0	482.1	448.0	507.2	619.6	554.2
1942	668.6	645.5	685.9	578.3	479.1	279.5	555.4	0.0	621.3	461.4	519.9	619.6	498.5
1943	674.1	514.1	431.1	470.1	461.7	271.4	555.4	0.0	621.3	515.6	525.4	638.6	469.4
1944	702.1	674.6	654.1	553.8	410.6	211.4	211.0	0.0	0.0	528.9	508.1	628.9	424.1
1945	668.6	623.7	691.1	588.8	530.9	254.5	305.9	0.0	573.3	424.6	521.7	654.3	477.4
1946	629.9	591.1	421.6	546.2	481.0	273.5	348.9	893.6	463.5	421.5	510.7	601.7	463.1
1947	676.4	521.9	384.9	507.9	410.3	296.7	308.0	0.0	615.3	515.0	532.9	632.7	447.3
1948	623.1	599.0	631.6	517.4	431.9	295.0	269.1	717.2	983.4	506.5	513.3	724.5	464.0
1949	709.8	674.7	675.5	554.1	463.1	321.0	0.0	0.0	0.0	568.1	536.6	569.1	496.4
1950	696.4	642.7	587.7	572.2	485.9	379.8	495.3	0.0	524.2	492.3	547.9	687.9	544.1
1951	652.5	593.6	550.0	624.0	519.6	394.1	410.1	532.8	436.1	497.0	518.1	709.0	535.4
1952	733.2	633.1	670.4	669.9	436.7	331.7	570.8	0.0	726.9	494.9	622.1	696.7	494.8
1953	683.3	637.2	654.3	674.7	532.8	281.1	0.0	0.0	0.0	525.4	551.8	701.7	537.5
1954	687.0	568.7	549.3	624.9	599.6	501.0	0.0	0.0	0.0	644.0	628.1	694.7	623.6
1955	715.6	684.7	634.7	581.6	650.2	313.8	493.7	0.0	0.0	899.6	896.4	767.0	541.7
1956	707.8	637.2	674.0	697.4	490.1	330.4	0.0	0.0	0.0	645.9	587.3	680.2	530.1
1957	741.2	655.2	644.5	581.4	519.6	269.5	376.4	0.0	497.6	526.8	661.4	734.5	513.7
1958	700.2	633.1	647.4	638.6	510.0	385.2	384.6	0.0	0.0	541.6	604.2	666.8	565.6
1959	665.0	617.0	668.8	645.3	527.4	447.7	0.0	611.9	569.5	608.1	658.6	691.9	530.9
1960	677.3	619.1	624.2	591.1	0.0	0.0	0.0	0.0	0.0	782.3	744.6	877.1	617.4
1961	810.6	686.9	654.7	953.7	0.0	0.0	0.0	0.0	0.0	642.1	767.8	770.6	743.9
1962	735.2	559.8	660.5	531.3	464.3	263.3	447.6	0.0	541.3	532.5	632.3	726.1	489.4
1963	739.2	339.8	648.0	626.0	418.6	235.4	471.2	0.0	567.7	731.6	761.6	873.3	472.9
1964	727.3	618.3	662.9	599.2	460.0	248.7	297.9	529.9	502.6	546.4	637.8	726.1	481.8
1965	696.4	645.8	656.1	635.7	644.0	302.8	332.3	870.2	484.9	436.0	572.2	710.4	454.5
1966	725.3	652.4	634.0	673.5	656.3	526.2	0.0	0.0	814.0	740.2	750.0	816.0	671.9
1967	711.7	584.6	617.3	587.3	487.4	218.9	273.0	659.4	486.2	540.8	576.0	671.5	455.9
1968	577.5	481.7	624.7	561.6	504.2	239.9	342.4	351.4	413.9	445.9	581.8	703.1	445.4
1969	659.6	598.7	364.8	481.0	432.1	348.7	297.2	765.5	567.7	556.8	689.1	684.0	469.5
1970	648.0	585.0	641.5	531.7	481.9	241.1	384.1	0.0	544.1	525.4	594.7	697.4	459.3
1971	677.8	91.2	351.0	487.3	426.2	281.5	553.0	0.0	532.4	417.1	565.7	703.1	428.2
1972	702.1	521.9	364.5	440.3	463.9	294.9	443.1	530.8	508.9	487.8	572.2	732.8	466.1
1973	628.2	555.4	527.3	596.1	410.5	268.3	410.8	585.7	454.8	462.1	553.3	739.8	473.7
1974	661.1	504.3	519.8	588.8	463.5	305.1	432.1	569.1	601.8	544.0	587.3	619.6	505.4
1975	684.3	624.3	684.2	582.4	388.7	234.1	188.9	388.2	499.3	1376.2	0.0	0.0	615.5
AVERAGE	674.0	578.4	580.0	581.0	449.4	296.1	293.0	288.8	395.0	563.4	588.3	684.2	512.9
MEDIAN	687.0	613.1	630.0	572.2	463.5	295.0	332.3	0.0	486.2	525.4	591.8	697.4	494.8
80 PERCENTILE	636.8	521.9	421.6	447.4	410.6	241.1	0.0	0.0	0.0	461.4	521.7	632.7	459.3
60 PERCENTILE	672.3	584.8	659.1	553.8	460.0	273.5	297.2	0.0	454.0	506.5	565.7	687.9	473.7
40 PERCENTILE	702.1	626.3	687.7	588.4	481.0	305.1	384.1	0.0	524.2	532.5	604.2	709.0	513.7
20 PERCENTILE	733.2	652.4	647.9	626.0	519.6	348.7	447.6	569.1	573.3	608.1	689.1	739.8	554.2
MAXIMUM	810.6	686.9	654.7	953.7	872.7	526.2	753.6	893.6	983.4	782.3	767.8	877.1	743.9
MINIMUM	661.1	91.2	351.0	414.7	0.0	0.0	0.0	0.0	0.0	417.1	507.2	569.1	424.1

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
1985 RECOMEND DEVELOPMENT LEVEL

78/02/17.

WATER QUALITY-YELLOWSTONE-MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	557.5	564.1	497.2	564.1	356.9	213.6	290.3	469.3	560.5	529.6	574.4	604.3	473.3
1940	499.0	563.9	571.4	597.2	382.8	214.8	316.1	614.4	585.5	498.2	594.0	609.9	507.6
1941	546.6	574.3	553.3	581.2	382.4	207.1	301.0	431.7	375.2	383.5	454.2	504.5	459.1
1942	513.4	490.4	469.5	522.4	313.7	235.2	260.3	405.7	503.5	487.0	501.3	543.0	409.3
1943	541.7	439.8	395.9	452.1	315.0	264.8	230.2	330.6	445.9	477.5	483.6	528.6	356.4
1944	533.9	510.1	462.5	542.8	347.6	268.0	243.6	390.4	475.6	490.5	502.1	589.1	389.6
1945	535.4	506.9	464.3	481.4	403.8	232.4	241.3	352.5	457.7	435.6	465.8	548.3	407.0
1946	507.7	484.4	468.7	545.9	369.8	222.4	279.2	430.5	462.9	449.2	487.3	555.5	433.4
1947	576.3	531.2	466.7	502.0	252.1	234.3	245.0	363.3	460.1	433.4	462.5	503.0	389.3
1948	516.5	487.5	439.1	540.5	300.3	260.8	258.7	390.3	525.3	502.7	499.3	619.5	398.6
1949	600.2	523.6	466.0	539.0	318.2	223.7	279.6	442.3	496.3	488.5	497.9	603.8	438.1
1950	583.9	511.5	424.7	527.2	388.4	232.3	244.3	331.4	439.1	407.6	446.3	475.6	396.0
1951	516.0	478.3	432.0	540.1	326.5	223.1	245.4	305.8	412.9	421.3	443.7	504.3	389.1
1952	520.1	481.0	436.8	491.4	234.5	235.2	268.5	379.7	495.6	511.8	533.6	581.7	403.7
1953	537.5	517.1	512.0	584.4	423.0	232.7	259.6	414.1	537.4	542.4	534.2	585.7	451.5
1954	593.4	509.4	542.3	577.9	334.5	207.9	263.5	415.2	541.1	536.0	544.3	601.9	458.0
1955	598.8	541.4	567.3	536.1	387.9	216.6	270.5	457.9	550.6	538.0	576.2	538.2	470.4
1956	568.5	529.6	466.6	524.9	264.4	251.4	271.0	402.5	503.0	531.9	501.7	571.9	410.3
1957	577.7	514.3	492.8	524.3	275.8	271.8	244.3	387.8	441.7	466.4	472.0	519.1	381.2
1958	533.3	499.9	497.7	579.8	318.7	219.1	284.7	449.4	536.1	543.7	545.5	586.8	453.4
1959	560.3	520.6	513.7	566.1	397.7	237.8	268.2	443.6	525.5	486.7	520.2	556.1	432.3
1960	587.1	519.6	475.7	570.2	423.9	214.2	315.7	506.8	560.5	567.2	541.1	614.4	495.2
1961	607.8	548.5	589.3	636.5	444.4	209.6	337.2	622.0	480.6	452.2	461.7	576.7	507.4
1962	590.9	489.5	494.4	527.3	323.2	243.9	254.2	368.8	453.5	467.6	503.4	542.7	404.6
1963	546.9	454.8	491.3	541.0	314.6	247.3	270.3	433.9	472.7	521.6	510.4	580.7	417.2
1964	539.3	495.8	525.5	546.0	327.5	247.9	243.1	380.5	472.7	515.5	511.3	549.5	401.1
1965	500.4	472.2	473.7	456.1	304.9	257.2	232.6	315.9	381.2	400.2	504.5	526.9	359.5
1966	552.9	511.6	469.9	572.7	375.3	204.8	303.0	511.2	557.2	557.3	526.8	536.4	480.0
1967	566.9	528.4	548.3	555.4	352.5	259.4	225.4	346.8	461.4	455.5	465.4	475.3	377.9
1968	469.2	428.1	436.8	554.5	344.2	256.0	249.7	328.1	384.5	416.9	449.8	512.3	377.9
1969	496.6	474.9	399.8	524.2	402.5	218.0	255.9	380.0	489.5	483.7	503.0	492.7	405.8
1970	504.4	472.3	511.4	576.4	277.3	259.5	240.6	382.8	460.7	462.0	479.4	506.3	388.0
1971	488.0	377.5	401.4	458.0	271.2	258.4	244.9	341.8	416.1	379.6	430.9	470.6	351.6
1972	503.1	456.6	353.7	502.4	314.8	244.5	261.4	350.1	423.1	403.1	414.5	540.6	378.3
1973	493.0	458.8	470.5	531.1	345.0	225.9	273.3	382.9	424.8	425.6	396.6	455.7	401.2
1974	494.6	464.9	463.3	503.2	343.3	264.9	240.3	345.2	442.5	456.6	431.9	491.9	371.4
1975	487.9	472.2	472.4	511.2	348.8	247.5	222.1	304.0	459.5	425.7	425.7	425.7	377.0
AVERAGE	547.2	497.0	472.7	548.7	335.8	236.6	263.9	403.0	477.8	462.2	479.6	529.1	416.3
MEDIAN	539.3	499.9	468.7	540.5	326.5	234.3	260.3	387.8	472.7	477.5	499.3	542.7	404.6
80 PERCENTILE	503.1	466.9	432.0	503.2	285.0	214.5	243.6	345.2	424.8	421.3	449.8	503.0	378.3
60 PERCENTILE	533.3	496.4	465.7	531.1	314.2	224.9	249.7	380.0	460.1	456.6	479.4	528.6	398.6
40 PERCENTILE	557.4	511.4	474.7	556.5	347.8	243.8	268.5	405.7	489.5	488.5	509.0	555.5	410.3
20 PERCENTILE	587.1	528.4	512.0	576.4	388.2	257.2	280.5	443.6	536.1	529.6	533.6	586.8	458.0
MAXIMUM	600.2	574.3	584.3	636.5	444.4	271.8	337.2	622.0	585.5	567.2	594.0	619.5	507.6
MINIMUM	469.2	377.5	353.7	452.1	234.5	204.8	225.4	305.8	375.2	379.6	396.6	455.7	351.6

STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 78/02/17.
1995 RECOMEND DEVELOPMENT LEVEL

WATER QUALITY-YELLOWSTONE AT SIDNEY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	619.7	622.9	485.8	624.2	413.9	241.6	341.0	573.8	645.7	619.3	636.9	672.2	537.9
1940	791.4	623.8	625.2	643.3	448.3	248.8	368.9	781.5	669.8	523.4	677.6	675.9	573.9
1941	729.9	632.7	603.7	626.2	431.8	241.0	347.7	475.8	411.3	424.8	513.3	554.8	510.2
1942	582.9	533.7	452.2	588.1	382.4	248.9	305.7	480.2	586.2	552.9	548.9	649.6	470.1
1943	605.5	450.9	397.5	445.0	380.3	294.1	268.1	347.1	528.2	565.8	552.6	598.8	403.1
1944	601.6	565.0	426.1	539.9	395.5	311.9	284.2	457.8	562.3	561.0	570.6	663.6	430.2
1945	599.0	583.8	479.1	627.3	436.6	280.8	281.4	419.5	533.9	503.3	538.5	642.3	488.2
1946	565.1	554.9	494.1	612.6	439.0	251.1	320.8	528.3	528.1	487.1	530.5	597.5	493.3
1947	624.3	567.4	484.3	598.5	389.4	262.0	287.6	432.9	546.1	501.0	521.4	573.4	437.6
1948	583.2	545.9	472.8	580.8	392.9	295.0	297.1	462.8	620.3	576.9	564.4	700.8	456.5
1949	662.2	591.9	493.6	581.9	405.8	253.2	326.0	538.9	590.4	570.8	571.2	677.9	508.0
1950	684.7	647.0	491.6	522.2	492.1	281.1	290.3	488.9	528.3	492.1	544.3	559.0	481.0
1951	579.8	541.9	504.0	565.4	423.2	248.9	291.6	372.4	483.2	499.0	507.5	643.0	461.1
1952	581.7	517.6	480.8	428.6	317.5	265.0	315.9	462.1	596.7	609.3	615.4	657.5	456.4
1953	610.0	574.3	569.7	548.2	479.5	246.0	316.2	497.2	629.4	634.0	613.3	672.9	520.2
1954	703.8	562.6	595.4	610.1	404.7	234.0	307.7	481.1	610.1	620.2	616.3	669.7	525.2
1955	604.5	604.3	523.8	586.0	441.5	249.4	322.8	555.8	651.0	620.3	655.7	638.5	538.1
1956	629.1	599.8	486.5	576.6	359.1	280.1	316.7	481.6	583.2	619.9	569.3	634.5	475.0
1957	633.6	585.9	527.4	580.9	367.8	297.7	289.7	470.6	536.8	549.1	547.0	602.4	448.1
1958	603.5	582.9	530.0	627.6	409.5	248.4	326.7	557.9	625.0	620.1	620.3	669.4	525.2
1959	636.8	586.3	398.4	618.5	462.7	262.2	311.5	553.7	615.1	564.4	615.4	635.3	494.6
1960	664.1	569.5	641.6	620.9	488.9	237.3	373.4	651.6	653.3	660.3	622.2	702.5	564.4
1961	669.3	612.8	622.5	691.9	522.4	239.5	408.3	1206.6	566.1	523.3	542.7	666.7	588.3
1962	649.5	523.6	525.9	575.4	362.5	283.5	287.8	432.8	534.8	523.4	560.7	603.5	447.5
1963	610.9	489.1	508.7	615.3	355.6	292.0	309.4	521.5	547.9	592.3	574.8	662.4	461.7
1964	595.2	545.8	560.9	599.0	391.1	283.0	281.0	443.7	537.6	588.9	570.2	652.1	455.2
1965	567.4	533.3	521.1	445.1	353.7	295.1	248.2	374.9	469.8	461.0	571.2	587.1	402.3
1966	600.0	559.1	496.1	634.7	453.5	233.1	353.8	620.2	642.8	617.3	595.2	594.9	548.4
1967	641.2	587.3	579.4	598.6	403.5	293.2	263.9	412.5	528.6	507.5	525.6	562.9	430.0
1968	521.9	496.6	447.8	608.0	451.0	287.6	292.1	392.5	445.4	477.6	496.9	561.6	431.9
1969	554.6	529.9	412.3	557.7	378.6	246.2	295.4	463.2	578.0	554.0	562.0	560.5	462.2
1970	566.8	517.9	530.0	421.9	339.6	287.4	289.6	458.4	545.4	533.1	544.6	554.2	444.7
1971	540.9	424.4	402.9	505.2	340.7	294.2	285.3	413.1	498.2	405.2	487.8	575.2	399.4
1972	566.5	497.5	349.9	558.4	377.1	275.6	305.6	421.1	500.2	468.1	473.6	593.6	428.5
1973	545.4	511.8	498.9	578.0	337.9	261.3	318.5	462.5	478.4	478.4	475.1	535.8	454.9
1974	557.4	520.7	517.9	557.5	404.1	289.6	281.4	415.9	514.7	511.1	491.5	550.6	431.8
1975	550.5	548.8	465.4	550.2	282.1	281.1	260.5	363.8	517.9	2036.9	1912.0	862.7	427.4
AVERAGE	613.6	551.9	494.7	581.3	400.7	267.9	307.8	498.2	557.3	585.2	598.6	627.4	474.9
MEDIAN	603.5	554.9	494.1	581.9	403.5	262.2	305.6	462.9	546.1	549.1	560.7	634.5	461.1
80 PERCENTILE	566.5	517.6	426.1	539.8	355.6	245.6	284.2	413.1	500.2	487.1	513.3	561.6	431.8
60 PERCENTILE	595.2	561.9	485.8	576.0	382.4	260.6	291.6	457.8	534.8	523.3	544.6	597.5	455.2
40 PERCENTILE	619.7	585.0	508.7	606.0	404.5	275.6	311.5	488.2	578.0	564.4	570.6	643.0	470.1
20 PERCENTILE	662.2	587.3	569.7	624.2	451.0	292.0	326.0	553.7	620.3	617.3	615.4	669.4	525.2
MAXIMUM	791.4	632.7	624.2	691.9	522.4	311.9	408.3	1206.6	669.8	660.3	677.6	702.5	588.3
MINIMUM	521.9	424.4	349.9	428.4	304.4	233.1	263.9	372.4	411.3	405.2	473.6	535.8	399.4

STUDY NO. 1 YELLOWSTONE LEVEL B OPERATION STUDY 76/02/16.
1995 RECOMMENDED DEVELOPMENT LEVEL

WATER QUALITY OF SHOSHONE RIVER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1979	614.4	634.6	582.5	630.9	647.4	645.5	661.0	661.0	661.0	659.6	656.1	622.8	0.0
1980	638.8	626.9	624.2	690.6	560.4	628.6	652.8	661.0	653.3	634.4	615.2	612.6	0.0
1981	630.3	632.6	620.3	582.8	582.8	400.0	552.7	400.0	400.0	453.9	537.1	601.7	0.0
1982	629.7	614.4	591.5	537.1	400.0	400.0	577.2	646.0	636.2	618.1	604.0	620.1	0.0
1983	618.1	610.0	555.7	472.3	584.5	400.0	400.0	618.8	637.8	633.1	596.2	606.5	0.0
1984	613.1	613.1	607.6	567.3	400.0	400.0	458.6	645.3	654.0	641.7	607.5	618.8	0.0
1985	614.7	610.6	583.3	599.0	616.1	400.0	400.0	579.9	596.4	607.2	590.6	599.0	0.0
1986	605.1	610.0	585.7	571.6	539.3	544.1	616.7	646.7	645.4	642.9	642.8	614.0	0.0
1987	635.4	628.4	603.8	545.2	510.4	400.0	400.0	617.4	634.2	613.3	581.4	611.3	0.0
1988	618.8	617.4	576.3	527.4	565.4	400.0	557.4	639.2	635.6	621.5	602.6	611.9	0.0
1989	620.1	625.3	577.4	583.5	635.1	446.2	628.3	654.2	645.4	628.3	606.1	629.0	0.0
1990	631.7	613.8	613.3	616.6	634.2	620.4	620.8	623.5	612.4	597.6	590.6	599.0	0.0
1991	621.5	623.1	615.3	606.2	625.6	442.0	400.0	576.5	630.0	584.7	597.6	617.4	0.0
1992	622.2	617.3	601.7	420.2	400.0	400.0	590.8	620.8	653.3	649.4	615.2	618.8	0.0
1993	612.5	621.7	607.4	627.2	646.7	641.4	656.2	655.5	658.2	639.9	625.1	618.1	0.0
1994	626.2	621.7	623.5	607.5	582.5	630.0	649.4	661.0	658.9	642.1	650.4	629.0	0.0
1995	632.4	624.9	624.2	615.9	640.4	652.5	659.6	661.0	659.6	656.9	630.0	618.1	0.0
1996	639.7	629.7	611.3	598.3	587.4	610.3	652.1	654.2	652.5	646.0	621.6	623.5	0.0
1997	626.9	623.6	620.1	633.5	457.3	400.0	400.0	637.2	635.6	627.6	588.5	602.4	0.0
1998	614.4	622.4	622.6	596.9	400.0	486.4	594.9	639.9	650.4	649.4	613.8	615.3	0.0
1999	622.8	621.7	610.5	613.1	547.8	623.7	647.4	658.3	657.5	641.7	622.3	623.5	0.0
2000	626.2	626.6	607.2	636.4	661.0	659.6	661.0	661.0	658.2	653.5	632.8	638.5	0.0
2001	639.3	633.3	612.6	659.6	661.0	592.7	651.5	658.3	597.6	614.0	594.8	624.2	0.0
2002	626.9	561.9	594.7	533.5	631.7	400.0	573.8	618.8	642.0	650.8	618.0	612.6	0.0
2003	619.4	599.1	583.3	623.0	607.2	400.0	609.2	655.5	632.1	646.0	610.3	621.5	0.0
2004	617.4	621.7	613.3	605.4	567.6	400.0	400.0	648.1	651.8	652.8	637.1	642.6	0.0
2005	640.5	640.3	629.7	573.1	596.9	400.0	400.0	594.2	583.8	583.3	592.0	603.1	0.0
2006	612.5	621.7	618.1	642.7	661.0	555.4	658.3	656.2	647.6	648.1	609.6	622.8	0.0
2007	632.4	631.1	611.3	641.3	623.5	400.0	400.0	639.9	638.5	639.9	600.4	621.5	0.0
2008	620.4	601.3	588.5	627.9	650.1	484.9	648.1	595.6	629.3	634.4	619.5	618.8	0.0
2009	615.1	618.8	613.3	594.2	640.6	490.7	592.2	654.2	645.5	632.4	607.5	618.1	0.0
2010	635.1	625.5	615.0	627.2	602.1	454.7	625.6	656.2	644.8	638.5	609.6	617.4	0.0
2011	624.2	630.9	618.1	617.3	595.6	400.0	613.3	644.6	642.7	576.5	597.6	639.2	0.0
2012	631.7	608.4	582.6	615.2	633.2	400.0	647.4	630.3	649.0	626.9	601.8	619.4	0.0
2013	628.5	614.5	573.6	602.6	471.6	576.5	609.2	646.7	526.6	661.0	661.0	661.0	0.0
2014	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
2015	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
AVERAGE	627.4	621.7	607.1	599.2	587.9	499.5	572.6	633.5	629.5	626.5	612.1	621.5	0.0
TOTAL	634.2	621.7	610.5	605.2	623.5	485.2	609.2	646.0	642.7	633.1	607.5	618.8	0.0
95 PERCENTILE	614.1	614.4	583.3	567.4	510.4	400.0	400.0	618.8	612.4	607.2	592.0	611.3	0.0
50 PERCENTILE	622.2	617.3	607.2	599.0	596.9	400.0	590.8	639.9	645.5	628.3	602.6	617.4	0.0
05 PERCENTILE	634.3	629.1	615.4	615.4	637.4	648.4	655.6	654.2	649.0	639.9	613.8	620.1	0.0
99 PERCENTILE	639.9	629.9	620.1	633.5	647.4	623.7	652.1	658.3	655.4	650.8	625.1	624.2	0.0
MAXIMUM	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
MINIMUM	605.1	561.9	554.7	420.2	400.0	400.0	400.0	400.0	400.0	453.9	537.1	599.0	0.0

STUDY NO. 1 FULL-NATURE LEVEL & OPERATION STUDY 76/02/16.
1980 RECOMMENDED DEVELOPMENT LEVEL

WATER QUALITY OF GREYHULL RIVER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	570.1	564.2	564.5	575.3	575.2	575.6	546.2	563.4	565.4	569.5	545.5	545.1	0.0
1940	571.1	571.5	569.1	575.3	574.2	562.9	562.8	563.4	565.4	573.3	545.5	545.1	0.0
1941	571.5	571.7	572.1	574.3	574.3	574.6	562.8	563.4	565.4	545.2	528.0	529.6	0.0
1942	571.4	571.1	571.6	575.3	575.0	574.9	534.2	563.4	565.4	573.3	545.5	545.1	0.0
1943	571.4	571.1	567.1	575.3	405.9	489.6	416.2	563.4	565.4	561.6	545.0	545.1	0.0
1944	568.5	562.7	572.1	574.6	574.4	574.5	562.1	563.4	565.4	573.3	545.5	545.1	0.0
1945	571.5	571.7	572.1	575.3	574.4	574.8	479.4	563.4	565.4	563.4	545.5	545.1	0.0
1946	573.5	571.3	567.8	575.3	572.3	574.6	562.8	563.4	565.4	573.3	545.5	545.1	0.0
1947	572.3	567.6	572.1	575.3	561.6	558.5	484.0	563.4	565.4	561.9	545.2	545.1	0.0
1948	539.2	550.5	571.6	575.3	573.0	534.5	562.8	563.4	565.4	573.3	545.5	545.1	0.0
1949	571.3	571.7	572.1	574.3	561.6	559.6	562.8	563.4	565.4	573.3	545.5	545.1	0.0
1950	571.4	571.1	572.1	574.3	572.7	581.1	474.1	563.4	565.4	555.2	538.3	539.6	0.0
1951	541.3	568.1	570.8	575.3	580.1	557.3	482.6	563.4	565.4	554.7	537.8	539.1	0.0
1952	580.4	572.8	572.1	575.3	575.3	532.8	562.8	563.4	565.4	573.3	545.5	545.1	0.0
1953	571.3	571.1	572.1	575.3	580.4	580.0	539.0	563.4	565.4	573.3	545.5	545.1	0.0
1954	571.5	571.7	572.1	573.3	559.4	554.5	525.0	563.4	565.4	573.3	545.5	545.1	0.0
1955	571.3	571.1	572.1	574.3	575.4	580.8	562.8	563.4	565.4	573.3	545.5	545.1	0.0
1956	571.4	571.7	572.1	573.3	485.4	481.1	545.7	563.4	565.4	573.3	545.5	545.1	0.0
1957	572.3	565.2	572.1	575.3	511.9	507.9	504.2	563.4	565.4	566.6	545.5	545.1	0.0
1958	563.2	562.1	572.1	577.4	550.4	549.3	562.8	563.4	565.4	573.3	545.5	545.1	0.0
1959	571.3	571.7	572.1	574.3	574.5	572.7	560.3	563.4	565.4	571.4	545.5	545.1	0.0
1960	571.1	562.4	567.4	574.3	574.4	574.8	562.8	563.4	565.4	573.3	545.5	545.1	0.0
1961	571.3	571.7	572.1	573.3	586.4	574.8	562.8	563.4	565.4	573.3	545.5	545.1	0.0
1962	571.5	571.1	570.5	575.3	539.4	534.9	531.1	563.4	565.4	568.9	545.5	545.1	0.0
1963	570.2	567.4	571.0	575.3	574.4	523.1	551.4	563.4	565.4	573.1	545.5	545.1	0.0
1964	569.5	564.1	571.4	575.6	570.8	568.1	471.4	563.4	565.4	572.2	545.5	545.1	0.0
1965	567.4	564.1	564.4	575.3	510.3	507.0	498.5	563.4	565.4	552.9	536.0	537.3	0.0
1966	559.1	562.3	563.7	575.3	574.7	574.8	562.8	563.4	565.4	573.3	545.5	545.1	0.0
1967	571.0	571.1	572.1	573.3	573.4	519.8	462.1	563.4	565.4	567.8	545.5	545.1	0.0
1968	568.9	564.1	567.6	574.7	574.3	574.6	541.9	563.4	565.4	559.6	543.1	544.2	0.0
1969	568.0	569.4	565.4	575.3	574.1	566.5	562.8	563.4	565.4	573.3	545.5	545.1	0.0
1970	564.6	564.3	570.5	541.6	510.3	512.5	526.8	563.4	565.4	567.2	545.5	545.1	0.0
1971	564.9	570.0	570.7	575.3	497.1	492.7	488.5	563.4	565.4	559.2	542.5	543.6	0.0
1972	564.4	562.1	565.3	575.3	574.4	574.8	562.8	563.4	565.4	570.4	545.5	545.1	0.0
1973	567.4	574.6	574.4	575.3	574.3	535.3	570.1	563.4	565.4	559.0	542.3	543.4	0.0
1974	565.2	570.1	574.4	575.3	477.5	472.6	498.6	563.4	565.4	567.5	545.5	545.1	0.0
1975	568.0	569.0	563.4	574.3	574.4	574.8	391.4	563.4	565.4	573.3	545.5	545.1	0.0
AVERAGE	564.4	561.1	564.8	577.6	574.4	574.8	522.9	563.4	565.4	567.9	544.1	544.0	0.0
MEDIAN	569.4	562.3	571.2	575.3	574.4	574.5	562.1	563.4	565.4	571.4	545.5	545.1	0.0
90 PERCENTILE	565.4	550.0	567.7	575.3	515.2	512.5	474.1	563.4	565.4	559.8	543.1	544.2	0.0
60 PERCENTILE	568.5	562.9	570.1	575.3	574.1	547.3	526.8	563.4	565.4	567.8	545.5	545.1	0.0
80 PERCENTILE	571.1	567.2	572.1	575.3	574.3	572.7	554.2	563.4	565.4	573.3	545.5	545.1	0.0
20 PERCENTILE	571.5	571.7	572.1	574.3	574.4	574.8	562.8	563.4	565.4	573.3	545.5	545.1	0.0
MINIMUM	539.2	550.5	564.8	573.3	485.4	481.1	391.4	563.4	565.4	573.3	545.5	545.1	0.0
MAXIMUM	573.5	574.6	574.4	575.3	574.4	574.8	562.8	563.4	565.4	573.3	545.5	545.1	0.0
MAXIMUM	571.1	567.9	569.8	575.3	477.5	472.6	498.2	563.4	565.4	545.2	528.0	529.6	0.0

2000

Recommended Development Level

BLANK PAGE

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL

78/02/17.

WATER QUALITY-YELLOWSTONE AT BILLINGS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	317.2	321.5	274.1	252.8	146.7	122.0	176.0	281.3	351.4	324.0	342.2	344.3	232.5
1940	336.1	320.2	319.4	290.5	157.2	120.4	198.1	340.1	341.6	294.8	331.9	341.9	243.3
1941	323.0	315.8	324.5	297.0	171.1	122.4	191.6	258.0	219.7	208.6	241.8	248.3	227.9
1942	305.5	297.5	260.8	237.0	150.7	117.7	135.1	240.4	294.5	279.0	276.9	278.4	199.6
1943	310.1	274.4	229.5	198.1	151.0	113.8	98.1	189.7	245.5	249.4	276.7	289.4	170.8
1944	309.6	301.9	292.2	305.5	175.4	116.2	126.2	240.8	272.4	278.5	291.2	332.6	203.8
1945	310.4	308.1	299.6	297.7	182.1	117.6	115.3	204.6	267.7	262.6	268.6	308.1	201.2
1946	301.7	284.3	282.0	231.7	163.4	119.4	157.4	264.8	289.7	258.5	286.4	298.4	213.4
1947	309.9	307.8	283.3	247.0	135.1	117.5	127.5	207.7	261.7	246.3	268.4	279.1	191.5
1948	309.5	295.2	280.9	260.7	135.5	114.0	144.8	223.2	311.0	293.9	305.8	341.6	191.1
1949	321.9	305.2	290.1	242.2	140.7	118.6	163.1	246.0	293.1	272.0	292.7	353.5	212.1
1950	334.5	313.4	283.7	271.6	173.9	116.6	111.0	193.6	253.5	234.4	237.1	249.7	191.1
1951	307.0	281.1	265.6	247.9	143.7	119.4	122.0	178.5	248.2	239.7	251.1	294.9	190.6
1952	309.4	294.5	287.4	215.4	125.4	116.6	146.9	213.7	291.9	305.9	314.7	309.9	193.0
1953	307.4	301.6	310.0	293.2	201.2	117.7	138.9	228.6	311.0	321.6	305.3	304.1	218.2
1954	321.1	297.6	317.2	275.6	147.0	120.7	131.2	227.7	309.4	308.0	307.4	316.4	213.2
1955	317.2	314.6	314.6	259.9	142.8	119.7	158.1	252.6	332.0	309.9	323.1	304.9	230.4
1956	310.0	299.6	257.7	236.9	126.5	115.1	146.3	221.4	291.8	307.4	289.0	300.9	189.3
1957	329.0	300.6	287.5	281.4	139.6	113.6	123.0	225.0	261.1	262.3	271.5	287.5	184.5
1958	312.1	304.3	303.9	285.0	140.9	120.2	176.0	258.1	320.0	325.4	298.9	301.0	222.1
1959	315.3	309.1	292.0	268.1	177.0	114.9	134.7	239.4	301.0	259.5	274.4	287.6	200.3
1960	322.4	302.3	292.2	270.8	189.9	119.9	194.3	270.7	348.6	329.6	312.5	324.2	242.7
1961	316.8	305.0	328.4	369.0	186.8	120.4	206.7	329.6	260.8	242.7	248.2	286.1	239.7
1962	314.0	274.8	275.4	225.2	149.8	116.1	133.0	203.4	253.5	270.1	295.0	292.9	190.7
1963	317.6	273.0	301.2	283.7	151.8	115.7	150.9	252.3	277.8	299.8	296.9	321.9	203.4
1964	314.0	296.7	310.3	274.2	157.6	116.1	118.8	216.6	286.7	307.9	293.8	293.2	196.6
1965	299.7	285.0	295.0	237.9	159.1	114.3	104.2	179.7	218.0	226.6	258.8	282.5	175.5
1966	305.3	289.5	278.9	259.7	149.5	121.8	173.8	262.5	301.7	290.8	285.1	288.5	223.1
1967	303.5	292.1	282.3	282.1	159.7	112.8	98.7	204.4	276.6	246.1	262.1	285.5	176.0
1968	309.1	274.5	267.5	266.2	180.7	114.5	119.4	179.6	211.1	231.3	247.0	281.7	183.0
1969	305.9	286.6	288.2	224.4	139.3	118.7	130.5	233.5	300.4	267.8	278.5	290.6	197.1
1970	311.1	293.7	298.5	283.4	136.9	113.9	125.7	220.2	236.4	245.2	269.2	289.6	183.1
1971	303.5	273.3	282.5	284.0	143.8	113.7	111.2	194.4	221.3	228.7	249.7	281.3	174.5
1972	309.6	280.8	238.7	260.5	156.8	114.9	135.2	191.4	220.7	216.4	241.1	281.6	184.2
1973	303.0	289.5	279.5	242.0	146.5	119.2	153.9	245.4	243.1	241.4	246.1	282.7	205.0
1974	303.3	298.6	291.8	246.4	165.6	112.8	110.1	189.4	251.9	245.2	264.9	296.6	178.4
1975	312.7	309.6	273.5	237.5	143.0	114.9	77.5	181.2	253.3	0.0	979.9	959.8	176.7
AVERAGE	312.7	296.6	287.0	262.0	156.3	117.1	139.6	230.5	277.0	264.6	299.8	317.1	201.3
MEDIAN	310.0	297.5	287.4	260.3	151.0	116.6	134.7	225.0	276.6	267.8	276.9	292.9	197.1
80 PERCENTILE	305.3	281.1	268.2	236.9	139.6	114.0	115.3	193.6	243.1	239.7	251.1	281.7	183.1
60 PERCENTILE	309.4	295.7	282.3	287.9	147.0	116.1	127.5	216.6	261.1	261.4	269.2	286.5	191.1
40 PERCENTILE	312.1	300.6	292.0	270.8	157.6	117.7	144.8	239.4	291.8	278.5	296.4	298.4	203.4
20 PERCENTILE	317.6	307.8	303.9	283.7	175.4	119.9	163.1	258.1	309.4	307.4	305.3	316.4	222.1
MAXIMUM	336.1	321.5	328.4	369.0	201.2	122.4	206.7	360.1	361.6	329.6	342.2	353.5	243.3
MINIMUM	299.7	273.0	229.5	198.1	135.4	112.8	98.1	178.5	211.1	208.6	237.1	249.7	170.8

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL

78/02/17.

WATER QUALITY-TONGUE - MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	804.5	663.6	462.5	618.9	0.0	336.4	0.0	0.0	0.0	529.0	774.8	831.4	586.4
1940	831.2	691.2	603.4	0.0	0.0	484.2	0.0	0.0	0.0	520.8	617.3	908.1	702.5
1941	837.9	713.8	669.6	0.0	679.3	342.2	0.0	0.0	541.2	454.3	516.4	648.3	545.3
1942	725.8	683.9	498.0	592.8	501.0	286.6	0.0	0.0	0.0	473.0	530.5	648.3	518.2
1943	729.7	544.7	437.7	474.3	479.1	277.8	0.0	0.0	0.0	534.8	536.7	670.8	484.4
1944	760.0	720.0	668.0	564.3	419.6	214.4	224.7	0.0	0.0	550.7	517.4	659.2	434.6
1945	725.8	660.8	503.9	602.1	578.0	263.9	380.5	0.0	0.0	432.9	532.5	649.8	497.0
1946	681.8	626.3	427.5	555.9	503.6	290.1	404.0	0.0	507.0	434.6	520.3	627.4	480.4
1947	515.6	553.0	372.2	514.2	419.2	305.5	383.4	0.0	0.0	534.1	545.2	663.7	461.6
1948	574.5	571.1	439.1	524.5	443.6	303.7	288.1	0.0	0.0	524.1	523.2	780.2	479.9
1949	768.3	716.9	379.2	564.7	480.8	333.1	0.0	0.0	0.0	600.1	549.4	590.2	511.7
1950	753.8	680.9	523.2	585.2	537.9	406.9	0.0	0.0	652.9	507.7	562.4	731.8	579.0
1951	706.3	629.0	575.4	647.6	559.0	427.4	532.7	0.0	844.0	513.2	528.5	759.2	574.9
1952	793.7	670.8	480.8	453.3	449.2	345.7	0.0	0.0	0.0	510.7	653.6	740.5	512.6
1953	739.7	675.1	581.2	719.8	581.2	288.3	0.0	0.0	0.0	586.5	567.0	749.6	560.0
1954	783.7	602.5	574.5	654.1	955.6	0.0	0.0	0.0	0.0	716.7	661.6	740.5	674.3
1955	774.6	724.6	558.4	573.2	477.1	324.8	624.5	0.0	0.0	862.9	759.1	811.7	573.5
1956	766.2	675.1	486.8	503.1	515.7	344.3	0.0	0.0	0.0	720.3	609.4	721.9	551.0
1957	802.4	694.2	568.3	596.3	559.0	275.7	456.9	0.0	574.9	548.2	708.0	794.0	581.5
1958	757.9	670.8	572.7	667.3	544.0	414.5	469.6	0.0	0.0	546.2	630.4	705.1	606.0
1959	719.9	653.7	372.1	558.9	571.9	532.1	0.0	0.0	0.0	656.4	704.0	737.0	558.6
1960	727.7	689.5	432.4	607.2	0.0	0.0	0.0	0.0	0.0	0.0	852.7	1056.4	641.4
1961	877.5	727.8	773.9	0.0	0.0	0.0	0.0	0.0	0.0	713.1	906.6	846.9	826.2
1962	795.9	592.3	469.5	540.2	482.2	269.1	735.3	0.0	733.9	555.1	667.2	782.4	511.5
1963	800.2	340.0	491.3	650.3	419.6	239.6	0.0	0.0	1407.3	1778.5	891.3	1046.2	491.3
1964	787.3	655.1	592.7	616.9	476.9	253.5	329.9	0.0	587.3	572.3	674.7	782.4	505.1
1965	669.3	461.8	462.5	438.7	457.7	312.4	378.2	0.0	546.7	445.3	591.0	761.2	471.1
1966	785.1	691.2	560.0	717.9	0.0	0.0	0.0	0.0	0.0	0.0	864.5	922.4	744.1
1967	770.4	619.6	534.5	602.7	512.1	222.2	297.8	0.0	549.6	545.3	595.5	711.1	472.8
1968	625.2	425.6	436.2	573.2	535.5	284.2	394.3	418.2	433.5	456.0	602.6	751.5	463.1
1969	714.0	634.4	349.9	485.7	443.8	346.3	328.9	0.0	1407.3	585.3	750.5	726.8	488.2
1970	702.5	596.7	504.3	542.2	409.9	285.5	468.5	0.0	751.8	546.5	618.4	744.1	475.9
1971	733.7	96.6	353.7	492.4	437.1	298.8	0.0	0.0	686.4	424.9	583.3	751.5	439.2
1972	760.0	553.0	367.7	495.5	481.7	308.0	688.0	0.0	604.0	502.6	591.0	791.7	486.2
1973	680.0	598.5	546.8	613.2	419.5	274.4	534.7	0.0	491.2	473.8	568.7	801.4	494.4
1974	499.1	534.3	537.6	602.1	481.3	315.0	616.0	0.0	0.0	569.2	609.4	648.3	533.0
1975	438.2	663.6	413.3	508.4	393.3	243.3	191.3	352.6	578.9	0.0	0.0	0.0	427.1
AVERAGE	729.6	612.8	497.3	525.8	433.0	290.8	233.7	90.8	311.3	538.5	624.7	738.7	539.0
MEDIAN	743.7	689.5	491.3	564.7	479.1	288.3	224.7	0.0	0.0	534.1	602.6	744.1	511.7
80 PERCENTILE	689.3	553.0	427.5	485.7	419.2	239.6	0.0	0.0	0.0	456.0	532.5	663.7	475.9
60 PERCENTILE	737.7	619.6	468.0	542.2	449.2	275.7	0.0	0.0	0.0	513.2	583.3	731.8	494.4
40 PERCENTILE	760.0	663.6	523.2	592.8	482.2	308.0	329.9	0.0	464.0	548.2	630.4	759.2	541.5
20 PERCENTILE	793.7	691.2	572.7	616.9	544.0	345.7	468.5	0.0	587.3	585.3	750.5	801.4	585.3
MAXIMUM	877.5	727.8	773.9	719.8	955.6	532.1	735.3	418.2	1407.3	1778.5	906.6	1056.4	826.2
MINIMUM	499.1	96.6	353.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	516.4	590.2	494.6

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL

78/02/17.

WATER QUALITY-YELLOWSTONE-MILES CITY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	555.2	562.5	496.1	544.5	362.0	211.3	298.6	527.3	600.1	551.3	570.2	602.5	484.8
1940	695.8	565.9	577.8	597.5	389.0	211.8	335.5	-25.7	610.0	497.8	590.8	609.2	521.5
1941	645.1	574.8	552.4	584.1	389.0	204.8	312.1	483.7	398.1	384.0	460.0	519.4	471.0
1942	513.8	481.2	441.1	526.5	323.4	232.2	266.1	440.6	526.9	486.8	499.2	542.3	418.5
1943	581.7	480.1	396.2	456.3	325.5	261.6	233.0	350.1	467.2	478.0	482.4	528.9	363.4
1944	534.1	511.0	443.1	545.6	356.3	265.2	247.7	421.1	495.8	489.9	499.6	548.0	397.4
1945	534.9	504.5	465.4	581.8	410.4	230.2	245.8	375.5	480.1	435.8	464.4	548.2	415.7
1946	509.2	486.4	470.5	546.3	376.5	220.1	285.9	481.7	490.6	454.7	492.1	563.6	443.8
1947	575.8	531.6	455.9	508.2	263.9	230.8	249.1	388.7	482.3	433.9	461.6	503.5	398.3
1948	517.1	488.7	439.9	544.0	310.2	257.7	263.6	421.8	548.0	502.5	497.3	618.9	407.0
1949	509.9	524.2	446.3	539.5	324.8	221.5	288.4	499.1	523.2	495.2	503.1	612.0	449.0
1950	583.0	512.0	429.0	527.6	395.5	230.1	249.5	353.6	461.5	408.4	445.9	476.9	404.6
1951	516.3	478.3	431.9	542.4	337.1	219.8	249.6	323.4	434.2	422.5	443.6	505.8	397.8
1952	519.7	481.2	436.9	495.0	286.2	232.1	274.5	408.0	517.7	511.6	531.2	541.1	412.0
1953	537.4	517.6	512.5	584.8	429.6	230.4	274.5	447.7	556.1	535.4	525.7	536.8	457.4
1954	626.1	528.8	561.8	577.7	340.8	205.6	267.9	447.1	557.7	525.7	510.7	556.7	466.4
1955	616.7	555.2	578.1	533.1	391.6	214.6	289.7	536.8	587.9	531.7	549.8	537.8	483.6
1956	577.4	539.1	466.6	533.9	283.4	245.2	281.3	482.3	530.0	534.5	505.8	585.7	426.1
1957	577.7	515.0	493.4	529.1	285.4	267.8	250.6	418.6	463.7	486.8	470.8	519.4	389.4
1958	534.5	501.5	499.2	579.4	325.3	216.8	292.9	509.8	563.9	539.4	538.9	591.8	463.7
1959	567.7	527.4	417.3	566.6	404.3	235.6	272.9	488.5	546.3	480.7	511.9	587.8	438.8
1960	626.4	545.5	491.7	569.8	426.4	208.3	349.5	599.1	584.0	568.1	580.3	620.9	515.5
1961	611.7	552.9	592.3	635.7	451.0	207.5	365.5	-25.7	499.5	450.0	459.7	575.8	519.7
1962	592.7	489.0	494.7	534.0	335.9	240.1	259.4	395.0	475.8	467.9	501.8	542.6	414.6
1963	549.1	455.7	493.4	565.0	324.1	244.3	277.9	478.9	495.8	521.7	508.6	580.4	427.1
1964	580.9	497.8	527.9	550.3	337.4	244.8	247.1	411.5	495.8	515.6	509.4	549.2	410.4
1965	501.3	473.6	475.1	459.6	315.7	254.2	235.7	334.2	401.0	401.4	504.5	528.7	386.9
1966	550.9	510.6	469.0	573.1	381.2	202.7	315.9	607.9	581.1	582.9	529.9	581.7	491.4
1967	546.2	531.2	539.2	562.0	364.1	254.9	228.2	369.5	484.3	455.6	464.0	475.2	396.5
1968	470.2	429.5	438.3	556.9	394.8	253.2	254.4	389.9	404.2	417.8	449.3	513.4	385.9
1969	496.6	475.5	400.2	524.6	309.1	215.7	260.2	412.9	517.9	489.2	507.2	499.5	414.5
1970	505.4	473.7	513.1	582.9	288.6	253.1	250.9	412.2	483.3	462.2	477.8	506.2	396.9
1971	488.7	378.1	402.2	461.6	281.0	255.3	248.8	363.4	437.3	380.4	430.4	471.7	358.4
1972	503.3	457.3	354.0	504.7	327.3	241.8	266.7	374.8	444.4	403.6	413.8	541.1	385.6
1973	495.4	461.5	473.5	535.0	294.6	222.9	281.8	414.5	446.4	426.5	396.1	456.8	410.9
1974	494.9	465.7	464.0	506.9	353.5	261.9	244.0	368.1	463.7	456.7	430.6	491.8	379.0
1975	489.2	474.1	429.9	513.3	257.1	244.8	224.4	321.7	482.1	1777.1	1487.7	800.1	384.5
AVERAGE	550.3	500.0	474.9	543.2	383.6	233.8	271.3	404.0	501.0	511.4	518.0	549.5	425.9
MEDIAN	540.9	501.5	469.0	544.0	337.1	230.8	266.1	412.9	495.8	478.0	499.2	541.1	414.5
80 PERCENTILE	503.3	445.7	431.9	508.2	294.6	211.8	247.7	353.6	446.4	422.5	449.3	503.5	386.5
60 PERCENTILE	534.1	486.4	455.9	534.0	325.3	222.9	254.4	395.0	482.3	456.7	477.8	528.7	407.0
40 PERCENTILE	555.2	512.0	491.7	556.9	356.3	240.1	274.5	421.8	517.7	489.9	504.5	548.2	426.1
20 PERCENTILE	592.7	531.6	513.1	577.7	391.6	256.2	289.7	483.7	556.1	525.7	525.7	585.7	466.4
MAXIMUM	695.8	574.8	592.3	635.7	451.0	267.8	365.5	607.9	610.0	568.1	590.8	620.9	521.5
MINIMUM	470.2	378.1	354.0	456.3	246.2	202.7	228.2	-25.7	398.1	380.4	396.1	456.8	358.4

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL

78/02/17.

WATER QUALITY-YELLOWSTONE AT SIDNEY

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	618.1	622.5	485.4	625.9	422.9	238.5	356.4	721.9	694.6	644.9	632.7	670.9	555.3
1940	787.4	676.0	635.2	645.4	458.6	243.3	413.9	0.0	704.0	525.0	674.1	675.7	502.0
1941	729.7	634.0	603.7	630.2	442.2	237.9	368.1	547.9	440.5	426.6	518.9	569.0	526.9
1942	583.7	535.1	453.0	503.1	395.7	262.5	314.2	541.2	616.3	554.9	546.9	649.4	483.1
1943	606.2	451.5	397.9	489.8	394.4	290.1	271.7	415.8	558.4	568.1	551.3	599.5	412.4
1944	602.4	566.3	426.8	543.3	408.8	308.4	289.7	509.2	591.5	562.6	568.0	643.0	480.5
1945	599.1	564.7	479.6	628.9	475.1	257.5	247.2	459.3	566.6	505.5	537.0	642.8	479.1
1946	547.0	557.8	496.0	614.3	449.5	248.0	331.2	644.3	565.3	493.8	534.9	605.4	508.6
1947	624.5	558.4	404.7	545.2	324.7	257.7	293.6	474.0	576.8	503.3	520.4	574.3	449.4
1948	584.3	587.7	475.9	585.2	406.4	291.1	303.8	519.8	652.6	579.1	562.4	700.6	468.6
1949	662.9	593.3	494.3	583.6	416.3	250.1	339.6	661.4	626.6	580.3	576.5	685.8	524.4
1950	643.1	546.9	491.6	523.6	462.6	258.1	297.9	440.7	559.1	494.8	583.8	560.6	473.4
1951	579.7	582.6	504.3	548.7	437.4	245.1	298.0	401.6	513.7	502.0	507.3	644.9	474.4
1952	581.9	518.3	480.5	432.0	330.8	261.2	326.0	513.8	617.9	610.7	612.9	657.3	468.0
1953	610.4	575.6	570.8	649.9	490.0	262.9	324.3	567.9	657.7	629.0	604.3	628.0	531.5
1954	750.4	559.4	614.6	611.2	414.9	231.4	314.5	537.3	647.7	609.2	582.1	628.3	539.0
1955	718.3	621.2	635.1	564.4	449.8	242.5	336.1	800.7	892.2	613.8	627.3	636.4	557.7
1956	638.7	611.2	488.7	586.2	381.1	273.4	331.1	550.7	618.7	622.8	573.4	647.7	495.3
1957	634.5	587.6	528.4	586.7	381.8	293.7	296.0	527.1	567.5	551.7	545.7	603.1	460.3
1958	605.3	585.7	531.9	629.3	419.9	245.3	339.3	720.0	662.2	617.8	613.6	674.4	541.8
1959	645.9	594.5	400.9	620.2	473.2	259.1	318.9	668.0	645.1	560.0	606.1	590.9	505.5
1960	708.6	594.3	471.9	621.4	496.0	234.9	480.8	0.0	686.7	660.8	619.3	706.9	590.4
1961	672.3	617.4	625.9	694.2	531.4	236.8	0.0	0.0	593.6	522.9	540.4	645.7	602.0
1962	651.1	523.7	525.8	583.3	378.6	279.1	293.8	477.1	567.2	525.5	559.0	603.8	460.4
1963	613.8	491.0	508.8	620.2	348.8	288.3	319.4	610.1	581.5	595.0	572.9	662.5	474.8
1964	597.4	589.4	572.7	604.3	404.6	279.2	286.1	490.9	568.0	590.1	578.3	652.2	487.9
1965	568.9	535.4	522.9	449.0	367.2	291.3	269.8	402.4	498.4	463.6	571.0	589.1	411.6
1966	598.7	558.9	495.8	636.4	463.4	230.4	377.8	1035.0	676.2	625.3	598.1	600.1	565.9
1967	641.2	590.9	579.2	606.0	418.5	289.0	267.5	447.9	561.0	509.4	524.2	583.2	441.6
1968	523.3	498.5	449.2	611.6	463.2	294.1	298.7	428.0	473.3	480.1	496.4	543.0	483.3
1969	555.0	531.1	412.9	559.2	389.1	243.1	301.5	521.7	615.2	561.1	566.0	587.2	474.6
1970	568.2	519.7	531.8	628.9	354.4	243.5	295.8	508.7	576.4	535.3	543.0	554.4	457.0
1971	581.9	425.3	403.7	509.5	356.2	290.4	290.7	448.5	516.6	487.0	487.2	576.6	408.5
1972	567.3	498.5	350.3	562.2	389.3	272.1	313.8	464.1	591.2	470.2	472.8	594.5	438.9
1973	588.1	514.9	501.8	580.8	351.2	257.5	331.5	520.7	508.3	480.8	474.5	537.2	448.3
1974	558.2	522.1	519.2	562.2	419.4	295.9	286.3	453.1	585.2	513.1	490.2	590.9	482.6
1975	592.3	591.6	467.0	593.3	294.1	277.6	263.7	390.1	587.1	1680.2	1431.4	856.9	497.5
AVERAGE	617.8	555.2	501.0	584.9	413.0	264.3	308.9	497.9	589.5	577.7	582.8	625.7	488.5
MEDIAN	605.3	558.4	495.8	586.7	414.9	259.1	303.8	509.2	576.8	551.7	559.0	605.4	474.4
80 PERCENTILE	567.3	518.3	426.8	545.2	368.8	242.5	287.2	428.0	531.2	493.8	518.9	567.2	482.6
60 PERCENTILE	597.4	582.6	485.4	583.3	395.7	257.5	297.9	474.0	567.2	552.9	583.8	599.5	468.0
40 PERCENTILE	618.1	586.3	508.8	611.2	419.9	272.1	318.9	521.7	615.2	582.6	571.0	642.8	483.1
20 PERCENTILE	642.9	594.3	570.8	628.9	462.6	288.3	336.1	610.1	652.6	610.7	604.3	663.0	539.0
MAXIMUM	787.4	676.0	635.2	694.2	531.4	308.4	480.8	1035.0	704.0	660.8	674.1	706.9	602.0
MINIMUM	523.3	425.3	350.3	492.9	324.7	230.4	0.0	0.0	480.5	487.0	472.8	537.2	408.5

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMENDED DEVELOPMENT LEVEL

78/02/16.

WATER QUALITY OF SHOSHONE RIVER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	539.2	553.6	563.9	575.5	578.0	583.1	563.9	563.8	565.7	572.6	545.5	545.1	0.0
1940	571.3	563.4	569.2	575.5	586.8	586.8	583.9	563.8	565.7	573.4	545.5	545.1	0.0
1941	570.9	571.1	571.5	582.5	586.8	586.8	563.9	563.8	565.7	550.4	533.7	535.5	0.0
1942	537.9	552.2	570.7	575.5	578.8	583.9	537.9	563.8	565.7	573.4	545.5	545.1	0.0
1943	570.9	571.1	571.5	575.5	500.2	502.8	431.9	563.8	565.7	563.8	545.5	545.1	0.0
1944	556.9	552.2	571.5	579.1	586.8	586.8	555.8	563.8	565.7	573.4	545.5	545.1	0.0
1945	570.9	571.1	571.5	582.5	586.8	586.8	493.5	563.8	565.7	565.5	545.5	545.1	0.0
1946	562.0	551.1	567.2	575.5	575.1	580.1	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1947	570.9	571.1	571.5	582.5	570.2	575.1	502.7	563.8	565.7	564.0	545.5	545.1	0.0
1948	557.5	550.0	571.3	575.5	535.7	539.3	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1949	570.9	571.1	571.5	582.5	576.9	581.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1950	570.9	571.1	571.5	582.5	586.8	586.8	487.7	563.8	565.7	557.3	540.8	542.3	0.0
1951	544.8	547.8	549.8	575.5	542.8	586.8	456.2	563.8	565.7	556.8	540.3	541.9	0.0
1952	544.3	551.8	571.5	575.5	538.5	542.3	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1953	570.9	571.1	571.5	582.5	586.8	586.8	552.6	563.8	565.7	573.4	545.5	545.1	0.0
1954	570.9	571.1	571.5	579.1	573.0	578.0	538.6	563.8	565.7	573.4	545.5	545.1	0.0
1955	570.9	571.1	571.5	582.5	586.8	586.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1956	570.9	571.1	571.5	582.5	497.2	499.5	559.4	563.8	565.7	573.4	545.5	545.1	0.0
1957	570.9	571.1	571.5	581.4	515.0	517.9	522.9	563.8	565.7	568.8	545.5	545.1	0.0
1958	549.0	558.9	571.5	577.0	554.0	558.3	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1959	570.9	571.1	571.5	582.5	586.8	586.8	563.9	563.8	565.7	573.4	545.5	543.1	0.0
1960	570.9	571.1	571.5	575.5	586.8	586.8	563.9	563.8	565.7	573.4	545.5	550.0	0.0
1961	573.6	574.5	572.8	583.3	586.8	586.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1962	570.9	571.1	571.5	575.5	553.6	557.9	508.7	563.8	565.7	571.1	545.5	545.1	0.0
1963	570.3	556.2	570.5	575.5	529.2	532.6	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1964	570.9	571.1	571.5	577.6	573.3	578.1	485.1	563.8	565.7	573.4	545.5	545.1	0.0
1965	570.1	570.1	568.6	575.5	513.7	516.5	452.2	563.8	565.7	555.1	538.5	540.1	0.0
1966	542.5	551.7	563.1	575.5	586.8	586.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1967	570.9	571.1	571.5	582.5	538.7	542.5	475.8	563.8	565.7	570.0	545.5	545.1	0.0
1968	567.3	556.9	567.5	580.0	586.8	586.8	555.6	563.8	565.7	562.0	545.5	545.1	0.0
1969	551.5	548.7	567.9	575.5	571.1	576.0	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1970	570.9	571.1	571.5	582.5	527.3	530.6	540.4	563.8	565.7	569.3	545.5	545.1	0.0
1971	567.4	555.7	570.1	575.5	499.8	502.2	482.2	563.8	565.7	561.4	545.0	545.1	0.0
1972	550.1	561.7	562.8	575.5	586.8	586.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1973	570.9	571.1	561.2	575.5	561.1	564.6	563.8	563.8	565.7	561.2	544.8	545.1	0.0
1974	549.6	549.5	567.9	575.5	480.4	482.1	508.3	563.8	565.7	569.7	545.5	545.1	0.0
1975	567.8	557.2	568.8	577.5	586.8	586.8	405.1	563.8	565.7	573.4	545.5	545.1	0.0
AVERAGE	564.0	563.2	569.8	578.4	558.9	561.3	531.8	563.8	565.7	569.2	544.7	544.7	0.0
MEDIAN	570.9	571.1	571.5	575.5	573.0	576.0	555.8	563.8	565.7	573.4	545.5	545.1	0.0
80 PERCENTILE	550.1	551.8	567.9	575.5	527.3	530.6	487.7	563.8	565.7	562.0	545.5	545.1	0.0
60 PERCENTILE	569.0	556.9	570.7	575.5	553.6	557.9	540.4	563.8	565.7	570.0	545.5	545.1	0.0
40 PERCENTILE	570.9	571.1	571.5	579.1	570.0	583.1	563.9	563.8	565.7	573.4	545.5	545.1	0.0
20 PERCENTILE	570.9	571.1	571.5	582.5	586.8	586.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
MAXIMUM	573.6	574.5	572.8	583.3	586.8	586.8	563.9	563.8	565.7	573.4	545.5	550.0	0.0
MINIMUM	537.9	547.8	561.2	575.5	480.4	482.1	431.9	563.8	565.7	550.4	533.7	535.5	0.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL

78/02/16.

WATER QUALITY OF GREYBULL RIVER

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	619.4	624.6	582.6	620.9	647.4	685.5	661.0	661.0	661.0	659.6	656.1	622.6	0.0
1940	634.4	624.9	624.2	640.6	560.4	628.6	652.8	661.0	655.3	634.4	615.2	612.6	0.0
1941	630.3	632.6	620.6	582.8	592.4	600.0	552.7	600.0	600.0	653.9	537.1	601.7	0.0
1942	629.7	614.4	591.5	537.1	600.0	600.0	577.2	646.0	634.2	618.1	604.0	620.1	0.0
1943	618.1	610.0	556.7	472.3	584.5	600.0	600.0	618.8	637.8	633.1	596.2	606.5	0.0
1944	618.1	615.1	607.4	567.5	600.0	600.0	658.6	645.3	654.0	631.7	607.5	618.8	0.0
1945	616.7	616.6	583.3	594.0	618.1	600.0	600.0	579.4	596.9	607.2	590.6	599.0	0.0
1946	605.1	610.0	596.7	571.6	639.2	584.1	616.7	646.7	565.9	562.9	582.8	614.0	0.0
1947	635.8	623.6	605.8	565.2	510.4	600.0	600.0	617.4	634.2	613.3	581.4	611.3	0.0
1948	618.8	617.3	576.5	527.9	565.6	600.0	557.4	639.2	635.6	621.5	602.6	611.9	0.0
1949	620.1	625.3	577.9	583.5	635.1	646.2	628.3	654.2	655.4	626.3	606.1	629.0	0.0
1950	631.7	615.8	613.3	616.6	639.2	620.9	620.8	623.5	612.4	597.6	590.6	599.0	0.0
1951	621.5	623.1	615.3	608.2	625.6	602.0	600.0	576.5	630.0	584.7	597.6	617.4	0.0
1952	622.2	617.3	601.7	420.2	600.0	600.0	590.8	620.8	653.3	649.4	615.2	618.8	0.0
1953	612.6	621.7	607.8	627.6	646.7	691.4	656.2	655.5	658.2	639.9	625.1	618.1	0.0
1954	626.2	621.7	623.5	607.5	642.6	630.0	649.4	661.0	658.9	652.1	650.4	629.0	0.0
1955	632.4	628.9	626.2	613.9	660.3	652.5	659.6	661.0	659.6	656.9	630.0	618.1	0.0
1956	629.7	629.7	611.3	648.3	647.4	610.3	652.1	654.2	652.5	646.0	621.6	623.5	0.0
1957	626.9	623.8	620.1	633.5	657.3	600.0	600.0	637.2	635.6	627.6	588.5	602.4	0.0
1958	619.4	622.4	622.8	596.9	600.0	646.4	594.9	639.9	650.4	649.4	613.8	615.3	0.0
1959	622.8	621.7	610.6	613.1	637.4	623.7	647.8	658.3	657.5	631.7	622.3	623.5	0.0
1960	626.2	632.6	607.2	636.4	661.0	659.6	661.0	661.0	658.2	653.5	632.8	638.5	0.0
1961	639.9	633.3	612.6	659.6	661.0	592.7	651.5	658.3	597.6	614.0	594.8	624.2	0.0
1962	626.9	561.9	584.7	593.5	651.7	600.0	573.8	618.8	642.0	650.8	618.0	612.6	0.0
1963	639.9	599.1	583.3	623.0	607.2	600.0	609.2	655.5	632.8	646.0	610.3	621.5	0.0
1964	617.4	621.7	613.3	605.4	567.4	600.0	600.0	648.1	651.8	652.8	637.1	642.6	0.0
1965	640.6	642.8	629.7	575.1	596.9	600.0	600.0	594.2	583.8	583.3	592.0	603.1	0.0
1966	612.6	621.7	618.1	642.7	661.0	655.4	658.3	656.2	647.6	648.1	609.6	622.8	0.0
1967	632.4	631.1	611.3	641.3	623.5	600.0	600.0	639.9	638.5	639.9	600.4	621.5	0.0
1968	624.9	621.3	608.5	627.9	650.1	649.9	648.1	595.6	629.3	634.4	619.5	618.8	0.0
1969	618.1	618.8	613.3	594.2	640.6	640.7	592.2	654.2	645.5	632.4	607.5	618.1	0.0
1970	625.1	625.3	616.0	627.2	602.4	634.7	625.6	656.2	648.8	638.5	609.6	617.4	0.0
1971	624.2	620.9	618.1	617.3	595.6	600.0	613.3	644.6	642.7	576.5	597.6	639.2	0.0
1972	631.7	606.4	592.6	615.2	639.2	600.0	647.4	630.3	649.0	626.9	601.8	619.4	0.0
1973	628.3	619.5	573.8	602.6	471.6	576.5	609.2	646.7	528.6	661.0	661.0	661.0	0.0
1974	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
1975	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
AVERAGE	627.4	621.7	607.1	599.2	587.9	598.5	572.6	633.5	629.5	626.5	612.1	621.5	0.0
MEDIAN	626.2	621.7	610.6	608.2	623.5	646.2	609.2	646.0	642.7	633.1	607.5	618.8	0.0
80 PERCENTILE	618.1	614.4	583.3	567.3	510.4	600.0	600.0	618.8	612.4	607.2	592.0	611.3	0.0
60 PERCENTILE	622.2	619.5	607.2	599.0	596.9	600.0	590.8	639.9	635.6	626.3	602.6	617.4	0.0
40 PERCENTILE	628.5	623.1	613.5	616.6	637.6	646.4	625.6	654.2	649.0	639.9	613.8	620.1	0.0
20 PERCENTILE	632.4	628.9	620.1	633.5	647.4	623.7	642.1	658.3	655.4	650.8	625.1	624.2	0.0
MAXIMUM	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
MINIMUM	605.1	561.9	576.7	420.2	400.0	400.0	400.0	400.0	400.0	653.9	537.1	594.0	0.0

2000

Recommended Development Level

Without SRD Projects

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STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
78/03/16.
2000 RECOMMEND DEVELOPMENT LEVEL
WITHOUT SRD PROJECTS
WATER QUALITY-YELLOWSTONE AT BILLINGS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1934	317.2	321.5	274.1	252.8	146.7	122.0	176.0	281.3	351.4	324.0	342.2	344.5	232.5
1940	336.1	320.2	314.4	290.5	157.2	120.4	198.1	360.1	361.6	294.6	331.9	341.9	243.3
1941	325.0	315.6	324.5	297.0	171.1	122.4	191.6	256.0	219.7	208.6	241.8	268.3	227.9
1942	305.5	297.5	260.6	227.0	150.7	117.7	135.1	240.4	296.5	274.0	276.9	278.4	199.6
1943	310.1	274.4	229.5	198.1	151.0	115.8	98.1	189.7	245.5	269.4	276.7	284.4	170.8
1944	309.5	301.9	292.2	305.5	175.4	116.2	126.2	240.8	272.4	278.5	291.2	332.6	203.8
1945	310.4	306.1	299.6	297.7	162.1	117.6	115.3	204.6	267.7	262.6	268.6	308.1	201.2
1946	301.7	284.3	282.0	231.7	163.4	119.4	157.4	264.8	289.7	256.5	286.4	298.4	213.4
1947	309.9	307.6	283.3	247.0	153.1	117.5	127.5	207.7	261.7	246.3	268.4	279.1	191.5
1948	309.3	295.2	280.9	260.7	153.5	114.0	144.8	223.2	311.0	293.9	305.8	341.6	191.1
1949	321.4	303.2	290.1	242.2	140.7	118.6	163.1	266.0	293.1	272.0	292.7	353.5	212.1
1950	334.5	313.4	283.7	271.6	173.9	119.6	111.0	193.6	253.5	234.4	237.1	249.7	191.1
1951	307.0	281.1	265.6	247.4	143.7	119.4	122.0	178.5	248.2	239.7	251.1	294.9	190.6
1952	309.4	294.5	287.4	215.4	125.4	116.6	146.4	213.7	291.9	305.9	314.7	309.9	193.0
1953	307.4	301.6	310.0	293.2	201.2	117.7	138.4	226.6	311.0	321.6	305.3	304.1	218.2
1954	321.1	297.5	317.2	275.8	147.0	120.7	131.2	227.7	309.4	308.0	307.4	316.4	215.2
1955	317.2	314.6	314.6	259.9	182.8	119.7	158.1	252.6	332.0	309.9	323.1	304.9	230.4
1956	310.0	299.6	257.7	236.9	126.5	115.1	146.3	221.4	291.8	307.4	299.0	300.9	189.3
1957	329.0	300.6	287.5	281.4	134.6	113.6	125.0	225.0	261.1	262.3	271.5	287.5	184.5
1958	312.1	304.3	303.9	283.0	140.3	120.2	176.0	258.1	320.0	325.4	298.9	301.0	222.1
1959	315.3	304.1	292.3	268.1	177.0	114.4	134.7	239.4	301.0	259.5	274.4	287.6	200.3
1960	322.4	302.3	292.2	270.8	189.9	119.9	194.3	270.7	348.6	329.6	312.5	324.2	242.7
1961	316.8	305.0	328.4	369.0	186.8	120.4	206.7	329.6	260.8	242.7	248.2	286.1	239.7
1962	314.0	274.8	273.4	225.2	149.4	116.1	133.0	203.4	253.5	270.1	285.0	292.9	190.7
1963	317.6	276.0	301.2	283.7	151.4	115.7	150.9	252.3	277.8	299.6	296.9	321.9	203.4
1964	314.0	298.7	310.3	274.2	157.4	116.1	118.8	216.6	286.7	307.9	293.8	293.2	196.6
1965	294.7	285.0	293.0	237.4	159.1	114.3	104.2	179.7	218.0	226.6	256.8	282.5	175.5
1966	305.3	289.5	274.9	259.7	184.5	121.8	173.8	262.5	301.7	290.8	285.1	288.5	223.1
1967	303.5	292.1	292.5	282.1	159.7	112.8	98.7	204.4	276.6	246.1	262.1	285.5	176.0
1968	309.1	274.5	267.5	266.2	180.7	114.5	119.4	179.6	211.1	231.3	247.0	281.7	183.0
1969	305.4	286.6	265.2	224.4	139.3	116.7	130.5	233.5	300.4	267.6	278.5	290.6	197.1
1970	311.1	296.7	296.5	285.4	136.4	113.9	125.7	220.2	236.4	245.2	269.2	289.6	183.1
1971	303.5	273.3	282.5	244.0	143.8	113.7	111.2	194.8	221.3	228.7	249.7	281.3	174.5
1972	309.5	280.3	259.7	260.5	156.8	114.9	135.2	191.4	220.7	216.4	241.1	281.6	184.2
1973	303.0	289.5	279.5	242.0	146.5	119.2	153.9	245.4	243.1	261.4	266.1	282.7	205.0
1974	305.5	296.6	291.6	246.4	165.6	112.6	110.1	189.4	251.9	265.2	264.9	296.6	178.4
1975	312.7	309.6	275.5	237.5	145.0	114.9	77.5	181.2	255.3	0.0	979.9	959.8	176.7
AVERAGE	312.7	296.6	287.0	262.0	159.5	117.1	139.6	230.5	277.0	264.6	299.6	317.1	201.3
MEDIAN	310.0	297.5	287.4	260.5	151.0	116.8	134.7	225.0	276.6	267.8	276.9	292.9	197.1
80 PERCENTILE	305.3	281.1	268.2	230.9	139.5	114.0	115.3	193.6	243.1	239.7	251.1	281.7	183.1
60 PERCENTILE	309.4	295.7	282.3	247.9	147.0	116.1	127.5	216.4	261.1	261.4	269.2	288.5	191.1
40 PERCENTILE	312.1	300.6	292.0	270.8	157.6	117.7	144.8	239.4	291.8	278.5	286.4	296.4	203.4
20 PERCENTILE	317.5	307.6	303.9	283.7	175.4	119.9	165.1	258.1	309.4	307.4	305.3	316.4	222.1
MAXIMUM	336.1	321.5	328.4	369.0	201.2	122.4	206.7	360.1	361.6	329.6	342.2	353.5	243.3
MINIMUM	294.7	273.0	229.5	195.1	125.4	112.6	98.1	178.5	211.1	208.6	237.1	249.7	170.8

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD PROJECTS
WATER QUALITY-TONGUE - MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	604.5	663.6	462.5	618.9	0.0	336.4	0.0	0.0	0.0	529.0	774.8	831.4	586.4
1940	631.2	691.2	603.4	0.0	0.0	484.2	0.0	0.0	0.0	520.8	817.3	908.1	702.5
1941	637.4	713.6	664.6	0.0	674.5	362.2	0.0	0.0	541.2	458.3	516.4	648.3	585.3
1942	725.5	685.9	496.0	592.8	501.0	286.6	0.0	0.0	0.0	473.0	530.5	648.3	518.2
1943	729.7	544.7	437.7	474.5	479.1	277.6	0.0	0.0	0.0	534.8	556.7	670.8	484.4
1944	760.9	720.0	468.0	564.3	419.6	214.4	224.7	0.0	0.0	550.7	517.4	659.2	434.6
1945	725.8	660.8	503.9	602.1	578.0	263.9	340.5	0.0	0.0	432.9	532.5	689.6	497.0
1946	681.3	626.5	427.5	555.9	504.6	280.1	404.0	0.0	507.0	429.6	520.3	627.4	480.4
1947	515.6	553.0	372.2	514.2	419.2	305.5	345.4	0.0	0.0	534.1	545.2	663.7	461.6
1948	674.5	571.1	445.1	524.5	443.6	303.7	288.1	0.0	0.0	524.1	523.2	780.2	479.9
1949	768.5	716.9	379.2	564.7	480.8	333.1	0.0	0.0	0.0	600.1	549.4	590.2	511.7
1950	753.3	680.9	523.2	585.2	537.9	406.9	0.0	0.0	652.9	507.7	562.4	731.8	579.0
1951	706.5	624.0	573.4	647.6	559.0	427.4	532.7	0.0	464.0	513.2	528.5	759.2	574.9
1952	795.7	670.8	480.8	455.5	449.2	345.7	0.0	0.0	0.0	510.7	653.6	740.5	512.6
1953	739.7	675.1	581.2	719.8	581.2	286.5	0.0	0.0	0.0	546.5	567.0	749.6	560.0
1954	745.7	602.5	574.5	654.1	955.5	0.0	0.0	0.0	0.0	716.7	661.6	740.5	674.3
1955	774.6	724.6	558.4	575.2	477.1	524.8	624.5	0.0	0.0	662.9	759.1	811.7	573.5
1956	766.2	675.1	486.8	503.1	515.7	344.3	0.0	0.0	0.0	720.5	609.4	721.9	551.0
1957	602.4	694.2	565.5	595.5	559.0	275.7	456.9	0.0	574.9	546.2	708.0	794.0	541.5
1958	757.9	670.8	572.7	667.5	544.0	414.5	464.6	0.0	0.0	566.2	630.4	705.1	606.0
1959	719.9	653.7	372.1	554.9	571.9	532.1	0.0	0.0	0.0	656.4	704.0	737.0	558.6
1960	727.7	649.5	432.4	607.2	0.0	0.0	0.0	0.0	0.0	0.0	852.7	1056.4	641.4
1961	877.5	727.8	773.9	0.0	0.0	0.0	0.0	0.0	0.0	713.1	906.6	846.9	826.2
1962	795.9	592.5	469.5	540.2	482.2	269.1	735.3	0.0	733.9	555.1	667.2	782.4	511.5
1963	800.2	360.0	491.3	650.3	419.6	239.6	0.0	0.0	1407.3	1778.5	891.3	1046.2	491.3
1964	737.5	655.1	592.7	616.9	476.9	253.5	329.9	0.0	587.3	572.3	674.7	782.4	505.1
1965	689.5	461.0	462.5	436.7	457.7	312.4	378.2	0.0	546.7	445.3	591.0	761.2	471.1
1966	785.1	691.2	560.0	717.9	0.0	0.0	0.0	0.0	0.0	0.0	864.5	922.4	744.1
1967	770.4	619.6	534.5	602.7	512.1	222.2	297.8	0.0	549.6	565.3	595.5	711.1	472.8
1968	625.2	425.6	436.2	573.2	535.5	244.2	394.3	418.2	433.5	456.0	602.6	751.5	463.1
1969	714.0	634.4	369.9	485.7	444.9	366.3	328.9	0.0	1407.5	585.3	750.5	726.8	488.2
1970	702.5	596.7	504.3	542.2	409.9	245.5	468.5	0.0	751.8	546.5	618.4	744.1	475.9
1971	733.7	96.6	353.7	492.4	437.1	298.8	0.0	0.0	686.4	424.9	585.3	751.5	439.2
1972	760.0	553.0	567.7	495.5	481.7	308.0	688.0	0.0	604.0	502.6	591.0	791.7	486.2
1973	640.0	588.5	546.8	613.2	419.5	274.4	534.7	0.0	491.2	473.8	568.7	801.4	494.4
1974	499.1	554.3	537.6	602.1	481.5	315.0	616.0	0.0	0.0	569.2	609.4	648.3	533.0
1975	438.2	663.6	413.3	508.4	393.3	245.3	191.3	352.6	578.9	0.0	0.0	0.0	427.1
AVERAGE	729.5	612.8	497.5	525.8	439.0	280.8	233.7	20.8	311.3	536.5	624.7	738.7	539.0
MEDIAN	743.7	649.5	491.3	564.7	479.1	288.3	224.7	0.0	0.0	534.1	602.6	744.1	511.7
80 PERCENTILE	684.5	553.0	427.5	485.7	419.2	239.6	0.0	0.0	0.0	456.0	532.5	663.7	475.9
60 PERCENTILE	727.7	619.6	469.0	542.2	449.2	275.7	0.0	0.0	0.0	513.2	583.3	731.8	494.4
40 PERCENTILE	760.0	663.6	525.6	592.8	482.2	308.0	329.9	0.0	464.0	548.2	630.4	759.2	541.5
20 PERCENTILE	795.7	691.2	572.7	616.9	544.0	345.7	468.5	0.0	587.3	585.3	750.5	801.4	585.3
MAXIMUM	877.5	727.8	773.9	719.8	955.5	532.1	735.3	418.2	1407.3	1778.5	906.6	1056.4	826.2
MINIMUM	499.1	96.6	353.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	516.4	590.2	434.6

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD PROJECTS
WATER QUALITY-YELLOWSTONE-MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	555.7	562.9	446.5	564.5	361.0	211.6	297.1	517.1	596.2	551.6	571.4	605.4	483.5
1940	697.0	566.3	578.4	537.5	387.9	212.0	332.1	910.8	606.1	498.1	592.2	610.2	519.9
1941	646.0	575.2	553.0	544.1	388.0	205.1	310.2	476.2	395.5	384.2	460.8	520.3	469.7
1942	514.2	461.4	441.4	526.4	522.5	232.4	265.4	435.3	525.4	487.0	500.1	543.2	417.6
1943	542.1	440.5	596.4	456.3	324.5	261.8	232.7	347.2	464.2	478.3	483.3	529.9	362.7
1944	536.5	511.3	443.4	545.5	355.2	265.5	247.2	416.3	492.6	490.2	500.6	588.9	396.6
1945	535.4	504.7	465.7	541.6	409.4	230.4	245.3	372.0	477.0	436.0	465.2	549.2	414.8
1946	509.5	486.6	470.8	546.5	375.4	220.4	284.8	474.2	487.4	454.9	493.1	564.5	442.7
1947	576.3	531.9	456.2	508.1	262.5	231.1	246.7	384.9	479.2	434.1	462.4	504.4	397.5
1948	517.4	494.9	440.1	544.0	309.2	258.0	263.0	417.0	544.5	502.7	498.2	619.8	406.1
1949	600.6	524.5	446.5	539.4	323.8	221.7	287.3	490.7	519.8	495.5	504.1	612.9	447.9
1950	583.5	512.5	429.2	527.6	394.5	230.3	249.0	350.6	458.5	408.6	446.7	477.8	403.8
1951	516.7	478.5	432.2	542.4	338.1	220.1	249.1	321.1	431.4	422.7	444.3	506.7	397.0
1952	520.1	481.4	437.2	495.0	245.1	232.4	275.7	403.7	514.4	511.9	532.3	582.1	411.1
1953	537.8	517.9	512.9	584.7	428.5	230.7	273.7	441.9	552.5	535.7	526.7	537.7	456.3
1954	626.4	529.1	562.4	577.6	339.5	205.8	267.2	441.3	554.1	526.0	511.7	557.6	465.2
1955	617.5	555.6	579.7	533.0	390.6	214.9	288.5	544.2	584.1	532.0	550.9	538.7	482.5
1956	578.0	539.4	466.9	535.8	282.4	245.4	280.4	436.7	526.5	534.8	506.8	586.7	425.2
1957	578.5	515.5	493.5	529.1	284.4	268.0	250.1	413.9	460.6	467.0	471.7	520.3	388.6
1958	534.9	501.8	499.6	579.3	324.3	217.0	291.6	500.7	560.3	539.6	540.0	592.7	462.5
1959	566.5	527.7	417.5	566.6	403.3	235.8	272.1	480.7	542.7	481.0	512.9	508.7	437.6
1960	627.2	545.9	492.1	569.8	427.3	208.5	344.9	582.2	580.2	568.4	541.4	621.8	513.8
1961	612.4	553.5	593.0	635.7	450.0	207.7	359.0	1199.8	496.2	450.2	460.5	576.7	518.5
1962	593.3	484.2	495.1	535.9	334.9	240.4	258.9	391.0	472.7	468.1	502.7	543.5	413.7
1963	549.5	455.6	493.8	565.0	323.1	244.6	277.0	471.6	492.6	522.0	509.5	581.3	426.2
1964	541.4	498.1	528.5	550.3	336.3	245.1	246.6	407.0	492.6	515.8	510.3	550.1	409.5
1965	501.6	473.8	475.4	459.6	314.7	254.4	235.5	331.6	398.4	401.5	505.4	529.6	366.3
1966	551.3	510.9	469.4	573.1	380.2	202.9	313.4	589.9	577.4	563.2	530.9	542.6	490.0
1967	566.7	531.5	539.7	561.9	363.0	255.2	227.9	366.1	481.1	455.8	464.8	476.1	385.7
1968	470.5	429.6	438.6	556.9	393.7	253.5	253.9	347.0	401.6	418.0	450.1	514.5	385.1
1969	496.9	475.7	400.4	524.5	308.0	215.9	259.6	408.3	514.6	489.4	508.2	500.4	413.6
1970	505.7	475.9	513.5	582.9	287.5	253.3	250.4	407.7	480.1	462.4	478.7	507.1	396.1
1971	486.9	376.3	402.4	461.6	279.9	255.6	244.4	360.2	434.4	380.5	431.1	472.7	357.7
1972	503.6	457.5	554.1	504.7	326.2	242.0	266.0	371.3	441.5	405.8	414.4	542.0	384.8
1973	495.7	461.7	473.9	535.0	293.6	225.2	280.8	409.9	443.4	426.7	396.7	457.7	410.0
1974	495.2	465.9	464.3	506.9	352.4	262.1	243.6	344.8	460.7	456.9	431.3	492.8	378.3
1975	489.4	474.3	430.1	513.3	254.0	245.1	224.2	319.3	479.0	1842.0	1551.1	801.0	383.8
AVERAGE	550.5	500.2	475.2	543.2	342.4	234.1	270.3	456.9	497.8	513.4	520.6	550.4	424.9
MEDIAN	541.4	501.8	469.4	544.0	336.1	231.1	265.4	413.9	492.6	478.3	500.1	542.0	413.6
80 PERCENTILE	503.6	465.9	432.2	504.1	293.5	212.0	247.2	364.8	443.4	422.7	450.1	504.4	385.7
60 PERCENTILE	534.5	486.6	456.2	533.9	324.3	225.2	253.9	407.0	479.2	456.9	478.7	529.6	406.1
40 PERCENTILE	555.7	512.5	496.1	556.9	355.2	240.4	273.7	436.7	514.4	490.2	505.4	549.2	425.2
20 PERCENTILE	593.3	531.9	513.5	577.6	390.6	254.4	288.5	490.7	552.5	526.0	526.7	586.7	465.2
MAXIMUM	697.0	575.2	593.0	635.7	450.0	268.0	359.0	1199.8	606.1	568.4	592.2	621.8	519.9
MINIMUM	470.5	376.3	554.1	456.3	245.1	202.9	227.9	321.1	395.5	380.5	396.7	457.7	357.7

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD PROJECTS
WATER QUALITY-YELLOWSTONE AT SIDNEY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	513.0	525.2	483.9	625.6	421.1	239.0	352.7	676.8	687.2	645.6	635.1	672.6	552.5
1940	790.2	526.7	656.5	645.4	456.7	243.7	401.3	0.0	696.6	525.4	676.9	677.5	589.6
1941	731.7	634.6	604.6	630.1	480.4	239.4	363.2	535.1	455.8	426.9	520.4	570.6	524.5
1942	584.5	545.5	453.5	593.0	395.9	262.9	312.7	527.1	611.7	555.4	548.6	651.0	481.3
1943	607.1	451.7	595.2	489.4	592.4	290.5	271.1	409.7	552.5	566.5	553.0	601.1	411.2
1944	605.5	566.8	427.1	543.2	407.0	308.8	288.9	497.8	585.3	563.1	569.8	664.6	439.0
1945	599.9	563.2	480.1	624.9	473.2	257.9	286.4	451.2	560.6	505.8	538.6	644.5	477.4
1946	567.7	558.5	496.5	614.2	447.6	246.5	329.0	616.5	559.3	494.1	536.5	607.0	506.5
1947	625.3	556.9	405.0	545.1	322.4	258.2	292.7	465.0	570.7	503.7	521.9	575.9	447.9
1948	585.1	598.2	474.3	595.2	404.6	291.6	302.6	507.6	645.7	579.6	564.2	702.2	467.0
1949	664.2	595.9	494.8	583.5	414.4	250.6	336.9	630.4	620.0	580.8	578.4	687.4	522.1
1950	668.4	567.4	492.1	523.8	460.7	258.5	296.4	433.5	553.2	495.2	545.5	562.2	471.6
1951	580.4	545.0	504.9	568.6	435.5	245.5	297.0	394.1	508.2	502.4	508.7	646.5	472.7
1952	582.5	516.7	481.0	432.0	328.9	261.6	324.1	502.0	611.3	611.3	615.1	659.0	466.3
1953	611.3	576.1	571.6	649.3	486.1	265.4	322.4	551.0	650.7	629.6	606.4	629.6	529.1
1954	752.6	559.5	615.6	611.1	413.3	231.6	313.0	523.5	631.0	609.8	584.0	629.9	536.5
1955	720.1	621.9	636.3	564.8	448.0	245.0	333.6	729.6	684.9	614.3	629.6	638.1	554.9
1956	639.8	611.9	489.2	586.1	379.2	273.8	328.9	535.6	612.2	623.3	575.3	649.4	493.3
1957	635.5	586.2	529.0	586.6	380.0	294.2	295.1	514.2	561.5	552.1	547.3	604.7	458.7
1958	606.2	586.2	532.5	629.3	418.1	245.7	336.7	675.5	655.2	618.4	615.7	676.0	539.5
1959	647.1	595.1	401.2	620.1	471.9	259.5	317.2	635.6	638.5	560.5	608.2	592.5	503.5
1960	710.3	594.9	472.5	621.4	494.1	235.3	440.4	1080.1	679.4	661.5	621.5	708.6	587.9
1961	673.7	618.1	627.0	694.1	529.5	237.3	571.2	0.0	587.3	523.3	542.1	667.3	600.7
1962	652.3	524.1	526.4	543.3	376.4	279.5	292.8	467.9	561.2	525.9	560.8	605.5	458.8
1963	614.7	491.3	509.3	620.2	366.9	288.7	317.7	587.8	575.3	595.5	574.7	664.1	473.1
1964	598.2	549.6	573.5	604.2	402.7	279.6	285.3	480.8	562.0	590.6	580.2	653.8	466.2
1965	569.5	533.8	525.5	488.9	365.3	291.8	269.3	396.9	493.1	463.9	572.9	590.8	410.6
1966	599.5	559.4	496.3	636.3	461.5	230.9	371.8	825.3	669.0	625.9	600.2	601.8	563.0
1967	642.3	591.4	580.0	605.9	416.7	289.4	267.0	440.4	555.0	509.8	525.7	564.9	440.1
1968	523.8	498.8	449.6	611.5	461.4	284.5	297.7	421.4	468.3	480.4	497.8	564.6	441.8
1969	555.6	531.5	415.2	559.2	387.4	243.6	300.4	509.3	606.7	561.6	567.8	568.8	472.8
1970	566.9	520.0	532.4	623.8	352.5	283.9	294.8	497.4	570.3	535.7	544.6	556.1	455.4
1971	592.5	425.5	404.0	509.5	352.3	290.9	289.8	440.9	511.1	407.3	488.6	578.3	407.3
1972	567.9	498.8	450.5	562.1	387.5	272.6	312.3	455.7	525.6	470.5	474.0	596.2	437.5
1973	548.7	515.3	502.4	580.8	349.3	257.9	329.5	508.3	502.9	481.1	475.8	538.8	466.6
1974	553.3	522.4	519.7	562.1	417.5	286.3	285.5	445.3	539.4	513.5	491.5	552.5	441.1
1975	552.9	552.1	467.4	553.2	292.3	278.1	263.2	385.1	541.3	1730.1	1494.8	858.6	496.1
AVERAGE	613.9	555.7	501.5	584.8	411.1	264.8	321.4	506.9	583.3	579.5	586.3	627.4	486.6
MEDIAN	606.2	556.9	496.3	586.6	413.0	259.5	312.3	502.0	570.7	552.1	560.8	607.0	472.7
80 PERCENTILE	567.9	518.7	427.1	545.1	366.9	243.0	286.9	433.5	525.6	494.1	520.4	568.8	441.1
60 PERCENTILE	594.2	545.0	485.9	586.3	393.9	257.9	297.0	467.9	561.2	523.3	545.5	601.1	466.3
40 PERCENTILE	619.0	566.8	509.3	611.1	418.1	272.6	317.7	514.2	608.7	563.1	572.9	644.5	481.3
20 PERCENTILE	664.2	594.9	571.6	628.8	460.7	288.7	336.7	616.5	645.7	611.3	606.4	664.6	536.5
MAXIMUM	790.2	634.6	656.5	694.1	529.5	308.8	571.2	1080.1	696.6	661.5	676.9	708.6	600.7
MINIMUM	525.5	425.5	350.5	432.0	322.4	230.9	267.0	0.0	435.8	407.3	474.0	538.8	407.3

2000

Recommended Development Level

Without SRD and Pumping Projects

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 PROJECTED DEVELOPMENT LEVEL
WITHOUT SRD AND PUMPING PROJECTS
WATER QUALITY-YELLOWSTONE AT BILLINGS

76/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	317.2	321.5	274.1	252.8	146.7	122.0	176.0	281.5	351.4	324.0	342.2	344.3	232.3
1940	336.1	320.2	319.4	290.5	157.2	120.4	198.1	360.1	361.6	294.8	331.9	341.9	243.3
1941	323.0	315.4	324.5	297.0	171.1	122.4	191.6	258.0	219.7	208.6	241.8	268.3	227.9
1942	305.5	297.3	260.5	227.0	150.7	117.7	135.1	240.4	294.5	279.0	276.9	278.4	199.6
1943	310.1	278.4	229.5	198.1	151.0	113.8	98.1	189.7	245.5	269.4	276.7	289.4	170.6
1944	309.3	301.9	292.2	305.5	175.4	116.2	126.2	240.8	272.4	278.5	291.2	332.6	203.8
1945	310.4	304.1	299.6	297.7	182.1	117.6	115.3	204.6	267.7	262.6	268.6	308.1	201.2
1946	301.7	284.3	282.0	231.7	163.4	119.4	157.4	264.8	289.7	258.5	286.4	298.4	213.4
1947	309.9	307.0	285.3	247.0	155.1	117.5	127.5	207.7	261.7	246.3	268.4	279.1	191.5
1948	309.3	295.2	280.9	260.7	155.5	114.0	144.8	223.2	311.0	293.9	305.6	341.6	191.1
1949	321.9	305.2	290.1	282.2	140.7	115.6	163.1	268.0	293.1	272.0	292.7	353.5	212.1
1950	334.3	313.4	285.7	271.6	175.9	116.6	111.0	195.6	253.5	234.4	237.1	249.7	191.1
1951	307.0	291.1	263.6	247.9	145.7	119.4	122.0	178.5	248.2	239.7	251.1	294.9	190.6
1952	309.8	294.3	287.4	215.8	125.4	116.8	146.9	213.7	291.9	305.9	314.7	309.9	193.0
1953	307.4	301.6	310.6	295.2	201.2	117.7	136.9	226.6	311.0	321.6	305.3	304.1	218.2
1954	321.1	297.6	317.2	275.8	147.0	120.7	151.2	227.7	309.4	308.0	307.4	316.4	213.2
1955	317.2	314.5	314.6	259.9	186.3	119.7	156.1	252.6	332.0	309.9	323.1	304.9	230.4
1956	310.0	299.6	257.7	256.9	126.5	115.1	146.5	221.4	291.8	307.4	289.0	300.9	189.3
1957	329.0	300.6	287.5	281.4	139.6	113.6	123.0	225.0	261.1	262.5	271.5	287.5	184.5
1958	312.1	304.5	303.9	285.0	140.0	120.2	176.0	258.1	320.0	325.4	298.9	301.0	222.1
1959	313.3	304.1	292.0	268.1	177.0	118.9	134.7	239.4	301.0	259.5	274.4	287.6	200.3
1960	326.4	302.5	292.2	270.8	184.4	119.9	194.5	270.7	348.6	329.6	312.5	324.2	242.7
1961	316.8	305.0	325.4	369.0	186.8	120.4	206.7	329.6	260.8	242.7	248.2	286.1	239.7
1962	314.0	274.8	275.4	225.2	149.4	116.1	133.0	203.4	253.5	270.1	285.0	292.9	190.7
1963	317.6	273.0	301.2	263.7	151.8	115.7	150.9	252.3	277.8	299.6	296.9	321.9	203.4
1964	314.0	296.7	310.3	274.2	157.6	116.1	118.6	214.6	286.7	307.9	293.6	293.2	196.6
1965	299.7	285.0	295.0	237.9	159.1	114.3	104.2	179.7	218.0	226.6	258.8	282.5	175.5
1966	305.3	284.5	278.9	259.7	149.5	121.8	173.6	262.5	301.7	290.8	285.1	288.5	223.1
1967	303.5	292.1	282.5	282.1	159.7	112.8	98.7	204.4	276.6	246.1	262.1	285.5	176.0
1968	304.1	274.5	287.5	265.2	180.7	114.5	119.4	174.6	211.1	231.3	247.0	281.7	183.0
1969	305.9	286.6	265.2	224.4	139.5	116.7	130.5	233.5	300.4	267.8	278.5	290.6	197.1
1970	311.1	293.7	298.5	283.4	136.9	113.9	125.7	220.2	236.4	245.2	269.2	289.6	183.1
1971	305.5	275.5	286.5	244.0	143.4	113.7	111.2	194.4	221.3	228.7	249.7	281.3	174.5
1972	309.5	280.6	258.7	260.5	156.3	114.9	135.2	191.4	220.7	216.4	241.1	281.6	184.2
1973	303.0	289.5	279.5	242.0	146.5	119.2	153.9	245.4	243.1	261.4	266.1	282.7	205.0
1974	303.5	296.6	291.6	246.4	165.6	112.8	110.1	189.4	251.9	265.2	264.9	296.6	178.4
1975	312.7	309.6	275.5	257.5	143.0	114.9	77.5	181.2	253.3	0.0	979.9	959.8	176.7
AVERAGE	312.7	296.6	287.6	262.0	155.5	117.1	139.6	230.5	277.0	264.6	299.8	317.1	201.5
MEDIAN	310.0	297.5	287.4	260.5	151.0	116.8	134.7	225.0	276.6	267.8	276.9	292.9	197.1
80 PERCENTILE	305.5	281.1	265.2	236.9	139.4	114.0	115.5	193.6	243.1	239.7	251.1	281.7	183.1
60 PERCENTILE	309.4	293.7	282.3	247.9	147.0	116.1	127.5	216.0	261.1	261.4	269.2	288.5	191.1
40 PERCENTILE	312.1	300.6	292.0	270.8	157.5	117.7	144.8	239.4	291.8	278.5	285.4	298.4	203.4
20 PERCENTILE	317.5	307.6	303.9	283.7	175.4	119.9	164.1	258.1	309.4	307.4	305.3	316.4	222.1
MAXIMUM	336.1	321.5	325.4	369.0	201.2	122.4	206.7	360.1	361.6	329.6	342.2	353.5	243.3
MINIMUM	299.7	274.8	224.5	198.1	125.4	112.8	98.1	178.5	211.1	208.6	237.1	249.7	170.6

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD AND PUMPING PROJECTS
WATER QUALITY-TONGUE - MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	804.5	664.6	462.5	614.9	0.0	336.4	0.0	0.0	0.0	529.0	774.8	831.4	586.4
1940	831.2	691.2	605.4	0.0	0.0	494.2	0.0	0.0	0.0	520.5	817.3	908.1	702.5
1941	837.9	715.4	669.5	0.0	679.4	362.6	0.0	0.0	541.2	456.3	516.4	648.3	585.3
1942	725.8	655.9	495.0	592.8	501.0	686.6	0.0	0.0	0.0	473.0	530.5	648.3	518.2
1943	729.7	584.7	437.7	474.5	479.1	277.8	0.0	0.0	0.0	534.8	536.7	670.8	484.4
1944	760.0	720.0	469.0	564.3	419.5	214.4	224.7	0.0	0.0	550.7	517.4	659.2	434.6
1945	725.8	660.8	503.9	602.1	576.0	263.9	540.5	0.0	0.0	432.9	532.5	689.8	497.0
1946	641.9	629.3	427.3	555.9	563.0	280.1	404.0	0.0	507.0	429.6	520.5	627.4	480.4
1947	515.6	556.0	376.2	514.2	419.2	303.5	343.4	0.0	0.0	534.1	545.2	663.7	461.6
1948	674.5	571.1	438.1	524.5	445.5	305.7	688.1	0.0	0.0	524.1	523.2	780.2	479.9
1949	768.3	719.9	579.2	564.7	480.0	533.1	0.0	0.0	0.0	600.1	549.4	590.2	511.7
1950	758.4	680.3	523.2	583.2	537.9	406.9	0.0	0.0	652.9	507.7	562.4	731.8	579.0
1951	706.3	624.0	575.4	647.6	554.0	427.4	532.7	0.0	464.0	515.2	526.5	759.2	574.9
1952	793.7	670.8	480.8	453.3	449.2	345.7	0.0	0.0	0.0	510.7	653.6	740.5	512.6
1953	739.7	675.1	561.2	719.8	581.2	248.5	0.0	0.0	0.0	546.5	567.0	749.6	560.0
1954	743.7	682.3	574.5	654.1	955.5	0.0	0.0	0.0	0.0	716.7	661.6	740.5	674.3
1955	774.6	724.6	555.4	575.2	477.1	324.8	624.5	0.0	0.0	862.9	759.1	811.7	573.5
1956	766.2	673.1	485.0	503.1	515.7	344.3	0.0	0.0	0.0	720.5	609.4	721.9	551.0
1957	802.4	694.2	566.5	596.5	559.0	275.7	456.9	0.0	574.9	548.2	708.0	794.0	541.5
1958	757.9	670.5	576.7	667.5	544.0	414.5	469.6	0.0	0.0	566.2	630.4	705.1	606.0
1959	719.9	655.7	372.1	554.9	571.9	532.1	0.0	0.0	0.0	656.4	704.0	737.0	556.6
1960	727.7	689.5	432.4	607.2	0.0	0.0	0.0	0.0	0.0	0.0	852.7	1056.4	641.4
1961	877.5	727.8	773.9	0.0	0.0	0.0	0.0	0.0	0.0	713.1	906.6	846.9	826.2
1962	795.9	592.5	469.5	540.2	462.2	269.1	735.3	0.0	733.9	555.1	667.2	782.4	511.5
1963	800.2	760.0	491.5	650.5	419.6	239.6	0.0	0.0	1407.3	1778.5	691.5	1046.2	491.5
1964	767.5	655.1	592.7	616.9	476.9	255.5	329.9	0.0	587.3	572.3	674.7	782.4	505.1
1965	649.5	461.8	462.5	438.7	457.7	312.4	376.2	0.0	546.7	445.3	591.0	761.2	471.1
1966	785.1	691.2	560.0	717.9	0.0	0.0	0.0	0.0	0.0	0.0	864.5	922.4	748.1
1967	770.8	619.6	534.5	602.7	512.1	222.2	297.8	0.0	549.6	565.3	595.5	711.1	472.8
1968	625.2	425.6	436.2	573.2	535.5	244.2	394.5	418.2	433.5	456.0	602.6	751.5	463.1
1969	714.3	634.4	369.9	483.7	443.8	366.3	328.9	0.0	1407.3	585.3	750.5	726.8	488.2
1970	706.5	595.7	504.3	542.2	409.9	245.5	468.5	0.0	751.8	546.5	618.4	744.1	475.9
1971	733.7	98.6	355.7	492.4	437.1	284.6	0.0	0.0	686.4	424.9	583.3	751.5	439.2
1972	760.0	553.0	367.7	495.5	481.7	308.0	688.0	0.0	604.0	502.6	591.0	791.7	486.2
1973	680.0	588.5	546.8	613.2	419.5	274.4	534.7	0.0	491.2	473.8	568.7	801.4	494.4
1974	499.1	534.5	537.6	602.1	481.3	315.0	616.0	0.0	0.0	569.2	609.4	648.3	533.0
1975	433.2	663.6	413.5	508.4	395.3	245.3	191.5	352.6	578.9	0.0	0.0	0.0	427.1
AVERAGE	724.6	612.8	497.3	525.9	438.0	280.8	233.7	20.6	311.5	536.5	624.7	738.7	539.0
MEDIAN	743.7	649.5	491.5	564.7	479.1	288.3	224.7	0.0	0.0	534.1	602.6	744.1	511.7
80 PERCENTILE	689.5	555.0	427.3	485.7	419.2	234.6	0.0	0.0	0.0	456.0	532.5	663.7	475.9
60 PERCENTILE	727.7	619.6	469.0	542.2	449.3	275.7	0.0	0.0	0.0	515.2	583.3	731.8	494.4
40 PERCENTILE	760.0	663.6	525.2	596.8	482.2	308.0	329.9	0.0	464.0	548.2	630.4	759.2	541.5
20 PERCENTILE	795.7	691.2	572.7	615.9	519.0	345.7	468.5	0.0	587.3	585.3	750.5	801.4	585.3
MAXIMUM	877.5	727.8	773.9	719.8	955.5	532.1	735.3	418.2	1407.3	1778.5	906.6	1056.4	826.2
MINIMUM	499.1	98.6	355.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	516.4	590.2	434.6

BLANK PAGE

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMEND DEVELOPMENT LEVEL
WITHOUT SRD AND PUMPING PROJECTS
WATER QUALITY-YELLOWSTONE-MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	556.0	566.1	495.6	564.6	360.5	211.7	296.5	512.1	594.6	552.2	572.1	603.9	482.9
1940	697.7	566.5	575.7	597.6	387.5	212.2	330.6	841.5	604.4	498.5	592.9	610.6	519.2
1941	586.5	575.5	556.2	584.2	387.7	205.2	309.3	472.5	594.4	384.5	461.2	520.8	469.2
1942	514.4	481.6	441.5	526.5	322.0	232.6	265.1	432.5	522.0	487.4	500.6	543.7	417.2
1943	542.5	480.4	395.5	455.4	324.2	262.0	232.5	345.7	462.9	478.7	483.8	530.3	362.4
1944	538.7	511.4	445.5	545.6	354.9	265.6	247.0	413.9	491.2	490.6	501.1	589.4	396.2
1945	535.6	504.9	465.9	541.9	409.1	230.6	245.2	370.3	475.6	436.3	465.6	549.6	414.4
1946	509.7	486.7	470.9	546.4	375.1	220.5	284.3	470.6	486.0	455.3	493.6	565.0	442.3
1947	576.7	542.1	455.3	503.2	262.5	231.2	248.5	383.0	477.8	434.5	462.8	504.9	397.1
1948	517.6	489.0	440.2	544.1	308.8	258.2	262.7	414.6	543.0	503.2	498.7	620.3	405.7
1949	601.0	524.7	485.6	539.5	323.5	221.9	286.7	486.6	518.4	495.9	504.6	613.4	447.5
1950	583.4	512.4	429.3	527.6	394.2	230.5	248.8	349.1	457.2	408.9	447.1	478.3	403.4
1951	516.9	478.6	432.3	542.5	333.7	220.2	248.9	319.9	430.2	423.0	484.7	507.2	396.6
1952	520.5	481.6	437.3	495.1	284.9	232.6	273.3	401.5	512.9	512.3	532.9	582.5	410.7
1953	538.0	514.0	513.1	584.6	428.2	230.8	273.5	439.0	551.0	536.2	527.3	538.2	455.8
1954	627.4	524.5	542.6	577.7	339.5	206.0	266.9	438.4	552.6	526.5	512.2	558.1	464.7
1955	617.9	537.6	579.0	533.1	390.2	215.0	268.0	538.2	582.5	532.5	551.6	539.2	481.7
1956	578.3	539.6	467.1	533.9	292.1	245.6	279.9	433.9	525.1	535.4	507.3	587.1	424.7
1957	578.5	513.3	494.0	529.2	284.1	256.2	289.9	411.6	459.3	467.4	472.1	520.8	388.3
1958	535.1	501.9	499.7	579.4	324.0	217.2	291.0	496.3	558.7	540.2	540.7	593.2	462.0
1959	568.6	527.9	417.5	585.6	402.9	234.0	271.7	476.9	541.2	481.4	513.5	509.2	437.3
1960	627.6	586.9	492.3	569.9	427.0	208.7	342.9	574.3	578.6	569.0	542.0	622.3	513.1
1961	612.6	553.3	595.3	635.8	449.6	207.9	356.2	944.5	694.9	650.6	660.9	577.2	517.7
1962	593.9	484.4	495.3	534.0	334.5	240.5	258.6	384.0	471.3	468.5	503.2	544.0	413.3
1963	589.8	455.9	494.0	565.1	322.7	244.7	276.6	466.0	491.2	522.5	510.1	581.8	425.8
1964	541.8	496.2	529.5	550.4	336.0	245.3	246.4	404.8	491.2	516.3	510.9	550.6	409.1
1965	501.8	475.9	475.6	859.7	314.4	254.6	235.2	330.3	397.3	401.8	506.0	530.1	366.0
1966	551.5	511.1	469.5	573.2	379.5	203.1	312.8	581.6	575.8	563.8	531.5	545.1	489.4
1967	567.0	531.6	534.9	582.0	362.7	255.3	227.6	364.5	479.8	456.2	465.3	476.6	385.4
1968	470.5	429.7	438.7	557.0	393.4	253.6	253.6	385.5	400.5	418.3	450.5	514.8	384.6
1969	497.1	475.6	400.4	524.6	307.7	216.1	259.3	406.1	513.1	489.9	508.7	500.9	413.2
1970	505.9	474.0	513.7	583.0	287.3	253.5	250.2	405.4	478.8	462.8	479.1	507.6	395.8
1971	489.1	374.3	402.5	481.7	279.6	255.7	246.2	354.6	433.2	380.8	431.5	473.1	357.4
1972	503.3	457.6	358.2	504.6	325.9	242.2	265.7	369.6	440.2	404.1	414.8	542.5	384.5
1973	495.9	461.8	474.0	535.1	293.2	223.3	280.3	407.6	442.2	427.0	397.0	458.2	409.7
1974	495.8	466.0	464.5	506.9	352.1	262.3	243.4	363.2	459.8	457.3	431.7	493.2	377.9
1975	489.5	374.4	430.3	513.4	255.7	245.2	224.1	318.2	477.6	2061.0	1595.0	801.5	383.4
AVERAGE	531.1	500.4	473.4	548.3	382.3	234.2	269.8	445.4	496.4	519.8	522.3	550.4	424.5
MEDIAN	541.0	501.9	484.5	544.1	335.7	231.2	265.1	411.6	491.2	478.7	500.6	542.5	413.2
50 PERCENTILE	504.9	486.0	452.3	548.2	293.3	212.2	247.0	363.2	442.2	423.0	450.5	504.9	385.4
60 PERCENTILE	538.7	486.7	456.5	538.0	324.0	223.3	253.6	404.8	477.8	457.3	479.1	530.1	405.7
40 PERCENTILE	556.3	512.4	496.3	557.0	359.9	240.5	273.3	438.9	512.9	490.6	506.0	549.6	424.7
20 PERCENTILE	593.8	532.1	513.7	577.7	390.2	254.6	286.0	485.6	551.0	526.5	527.3	587.1	464.7
MAXIMUM	697.7	586.9	595.3	635.8	449.6	266.2	356.2	944.5	694.9	2061.0	1595.0	622.3	519.2
MINIMUM	470.5	374.3	358.2	482.4	284.6	203.1	227.6	318.9	394.4	380.8	397.0	458.2	357.4

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD AND PUMPING PROJECTS
WATER QUALITY-YELLOWSTONE AT SIDNEY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	619.5	629.6	486.1	625.9	420.4	259.2	351.1	660.1	684.2	646.3	636.2	673.4	551.4
1940	791.5	627.1	639.6	693.4	456.1	244.0	396.8	0.0	693.5	525.9	678.2	678.1	586.7
1941	732.7	635.6	605.0	660.2	439.7	238.6	361.5	526.8	435.9	427.2	521.1	571.4	523.6
1942	584.8	555.7	453.5	593.1	393.2	263.2	312.1	521.0	609.0	555.9	549.4	651.8	480.5
1943	607.5	451.7	596.5	489.4	391.9	290.6	270.9	407.0	550.1	564.1	553.8	601.9	410.6
1944	603.7	557.1	427.2	543.5	406.3	309.1	288.5	492.8	582.7	563.6	570.7	665.4	436.4
1945	600.5	565.4	480.2	626.9	472.5	259.2	286.1	447.6	558.1	506.5	539.4	645.3	476.6
1946	568.0	558.5	495.7	614.5	446.9	248.7	326.0	605.5	556.8	494.5	537.2	607.8	505.6
1947	626.0	559.1	405.1	545.2	322.1	258.4	292.3	461.0	568.1	504.1	522.6	576.7	447.5
1948	585.4	584.4	474.5	585.3	405.9	291.8	302.1	502.3	642.8	580.2	565.0	703.0	466.2
1949	664.9	594.1	495.0	585.6	415.9	250.8	335.8	618.1	617.2	581.4	579.3	688.2	521.1
1950	665.0	567.6	492.5	523.6	460.0	258.7	296.4	430.3	550.8	495.6	546.3	563.0	470.9
1951	580.7	545.2	503.1	566.7	434.4	245.8	296.5	393.7	506.0	502.8	509.4	647.3	471.9
1952	585.0	518.6	481.2	436.0	328.2	261.9	325.2	496.9	608.6	612.0	616.1	654.7	465.6
1953	611.8	576.4	571.9	649.9	487.4	263.6	321.6	545.8	647.8	630.3	607.5	630.4	526.1
1954	753.7	560.1	616.0	611.2	412.3	232.0	317.4	517.6	628.2	610.4	585.0	630.7	535.5
1955	721.0	622.2	636.7	564.4	447.3	245.2	332.6	705.9	681.9	615.0	630.8	638.8	553.7
1956	640.5	612.2	489.4	586.2	378.6	274.0	328.0	529.1	609.5	624.0	576.2	650.1	492.5
1957	636.0	588.5	529.2	586.7	379.3	294.4	294.6	508.6	559.0	552.7	548.2	605.5	458.0
1958	606.6	586.5	552.7	629.3	417.4	246.0	335.6	656.8	652.3	619.1	616.8	676.8	538.2
1959	647.7	595.4	601.3	620.2	470.7	259.8	316.5	622.9	635.5	561.0	609.5	593.3	502.6
1960	711.1	595.2	472.5	621.4	493.5	235.6	430.0	917.8	676.4	662.3	622.6	709.3	586.5
1961	674.4	618.4	627.4	694.2	528.9	237.5	491.2	0.0	584.7	523.8	542.8	668.1	599.6
1962	652.8	524.5	526.6	583.5	376.1	279.7	292.4	465.9	556.7	526.4	561.6	606.3	458.1
1963	615.1	491.4	509.5	620.3	346.2	288.9	317.0	578.6	572.8	596.2	575.6	664.9	472.3
1964	598.6	550.0	573.6	604.3	402.0	279.9	284.9	476.4	559.5	591.2	581.1	654.6	465.5
1965	569.9	536.0	525.7	449.0	364.7	292.0	269.0	394.5	490.9	464.3	573.8	591.5	410.1
1966	600.0	559.6	496.5	636.4	460.8	231.1	369.4	762.1	666.1	626.6	601.2	602.6	561.8
1967	642.5	591.7	580.3	606.0	416.0	294.6	266.7	437.0	552.6	510.2	526.5	565.7	439.5
1968	524.0	499.0	484.8	611.6	460.7	284.7	297.2	418.5	466.2	480.8	498.5	565.4	441.2
1969	555.9	531.7	415.5	559.2	385.5	243.8	299.9	503.9	606.0	562.1	566.7	569.6	472.1
1970	569.2	520.6	532.7	628.9	351.9	284.2	294.4	492.4	567.8	536.2	545.4	556.8	454.7
1971	542.7	425.6	404.1	509.5	351.8	241.1	289.4	437.6	508.9	407.6	489.2	579.0	406.7
1972	564.2	499.0	350.6	562.2	396.3	272.8	311.7	452.0	523.2	470.9	474.6	597.0	436.9
1973	549.0	515.5	502.6	580.8	346.7	258.2	328.4	503.0	500.7	481.5	476.4	539.6	465.9
1974	559.1	522.6	520.0	562.2	416.8	286.5	285.2	441.9	537.0	513.9	492.2	553.3	440.5
1975	553.1	552.3	467.6	553.3	291.6	278.3	263.0	382.8	538.9	1805.9	1532.2	859.3	435.5
AVERAGE	619.4	555.9	501.6	584.9	410.4	265.0	316.2	495.5	580.7	582.1	588.1	628.1	485.8
MEDIAN	606.6	559.1	496.5	586.7	412.3	259.8	311.7	496.9	568.1	552.7	561.6	607.8	471.9
80 PERCENTILE	566.2	518.6	427.2	545.2	366.2	243.2	288.5	430.3	523.2	494.5	521.1	569.6	440.5
60 PERCENTILE	593.6	545.2	486.1	583.3	393.2	256.2	296.5	463.9	558.7	525.8	546.3	601.9	465.6
40 PERCENTILE	619.5	567.1	509.5	611.2	417.8	272.8	317.0	508.5	606.0	563.6	573.8	645.3	480.5
20 PERCENTILE	664.3	595.2	571.9	625.9	460.0	288.9	335.6	605.5	642.8	612.0	607.5	665.4	535.5
MAXIMUM	791.5	635.6	636.8	694.2	528.9	309.1	491.2	917.8	693.5	662.3	678.2	709.3	599.6
MINIMUM	524.0	425.6	350.6	432.0	322.1	231.1	266.7	0.0	433.9	407.6	474.6	539.6	406.7

2000

Recommended Development Level

Without SRD and Storage Projects

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD AND STORAGE PROJECTS
WATER QUALITY-YELLOWSTONE AT BILLINGS

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	317.8	321.9	274.5	252.6	146.7	122.0	174.3	274.7	345.4	324.2	343.7	345.5	231.6
1940	335.5	320.5	320.0	290.4	157.1	120.4	195.6	349.9	355.0	295.0	333.3	343.2	242.6
1941	323.5	315.1	325.2	296.9	171.0	122.4	169.4	253.5	217.9	208.6	242.6	269.1	227.2
1942	305.7	297.7	261.2	227.0	150.5	117.7	134.3	236.7	290.9	279.1	277.8	279.2	199.1
1943	310.5	274.5	229.6	198.1	151.0	115.8	97.6	186.2	243.2	269.6	277.7	290.3	170.5
1944	309.8	302.2	292.7	305.4	175.5	116.2	125.5	237.1	269.5	278.7	292.2	333.8	205.5
1945	310.6	305.4	300.1	297.6	182.0	117.5	114.6	202.7	264.9	262.7	269.5	309.1	200.7
1946	301.9	284.5	282.5	231.7	163.4	119.3	156.2	259.5	286.3	256.6	287.5	299.3	212.9
1947	310.1	308.0	283.8	247.0	135.1	117.5	126.8	205.6	259.0	246.4	269.3	279.9	191.1
1948	309.5	295.4	281.3	260.7	135.4	114.0	143.8	220.4	306.8	294.0	307.0	342.8	190.8
1949	322.2	305.5	290.5	242.2	140.7	119.6	161.7	260.7	289.5	272.1	293.8	354.8	211.6
1950	334.9	315.7	284.1	271.6	173.8	116.6	110.5	192.0	251.0	234.5	237.9	250.4	190.7
1951	307.2	281.2	266.0	247.6	145.7	119.4	121.3	177.3	245.9	239.8	251.9	295.8	190.2
1952	309.5	294.7	287.8	215.4	125.4	116.0	145.9	211.4	288.4	306.1	316.0	311.0	192.6
1953	307.5	301.9	310.5	293.2	201.1	117.7	136.0	225.7	306.8	321.8	306.4	305.1	217.6
1954	321.4	297.5	317.8	275.7	147.0	120.7	150.4	224.7	305.3	304.2	308.6	317.5	212.6
1955	317.4	314.9	315.1	259.8	182.7	119.7	156.8	248.2	327.0	310.1	324.4	305.8	229.7
1956	310.2	299.8	258.1	236.8	126.5	113.1	145.3	216.7	288.3	307.6	290.1	301.8	188.9
1957	329.4	300.9	287.9	281.3	139.6	113.6	122.3	222.2	258.5	262.4	272.4	288.4	184.1
1958	312.3	304.5	304.5	284.9	140.0	120.2	174.3	253.3	315.5	325.6	300.0	302.0	221.5
1959	315.5	309.4	292.5	268.1	176.9	114.9	133.9	235.8	297.2	259.6	275.4	288.5	199.9
1960	322.7	302.5	292.7	270.8	189.4	119.9	192.0	265.0	342.8	329.8	313.7	325.4	241.8
1961	317.1	305.5	329.0	305.8	196.9	120.4	203.8	317.8	258.1	242.8	249.0	286.9	238.9
1962	314.2	274.9	275.6	225.2	149.8	116.1	132.2	201.5	251.0	270.2	286.0	293.8	190.3
1963	317.9	275.1	301.7	285.6	151.8	115.7	149.7	247.9	274.7	300.0	298.1	323.0	202.9
1964	314.2	295.9	310.8	274.1	157.6	116.1	118.2	214.1	283.3	308.1	294.8	294.1	196.2
1965	299.8	285.2	295.0	237.8	159.1	114.3	103.7	178.5	216.2	226.6	259.7	283.3	175.2
1966	305.5	289.7	279.3	259.7	149.5	121.8	172.1	257.5	297.8	291.0	286.2	289.3	222.4
1967	303.6	292.3	292.7	282.0	159.7	112.8	98.2	202.5	273.5	246.2	263.0	286.3	175.7
1968	309.3	274.6	267.9	266.1	180.7	114.5	118.7	178.4	209.4	231.4	247.8	282.5	182.6
1969	306.0	285.8	268.5	224.4	159.2	116.7	129.7	230.2	296.6	268.0	279.5	291.4	196.7
1970	311.3	293.9	299.6	283.4	136.9	113.9	124.9	217.6	234.2	245.3	270.1	290.5	182.7
1971	305.7	275.5	282.9	244.0	145.5	115.7	110.6	192.8	219.4	228.8	250.5	282.1	174.2
1972	309.6	281.0	239.0	260.2	156.7	114.9	134.3	189.9	218.8	216.5	241.8	282.4	183.9
1973	303.2	289.7	279.9	242.0	146.5	119.2	152.7	241.5	240.8	261.6	267.0	283.5	204.5
1974	303.4	296.8	292.3	246.4	165.5	112.8	109.6	187.9	249.4	265.4	265.8	297.5	178.1
1975	312.9	309.9	275.9	237.5	145.0	114.9	77.2	179.9	250.8	0.0	1087.9	1065.3	176.3
AVERAGE	312.9	296.5	287.4	261.9	156.2	117.1	138.5	227.0	273.8	264.9	303.7	320.8	200.9
MEDIAN	310.2	297.7	287.8	260.2	151.0	116.8	133.9	222.2	273.5	268.0	277.8	293.8	196.7
80 PERCENTILE	305.5	281.2	268.5	235.8	139.6	114.0	114.6	192.0	240.8	239.8	251.9	282.5	182.7
60 PERCENTILE	309.8	293.9	282.7	247.8	147.0	116.1	126.8	214.1	258.5	261.6	270.1	289.3	190.8
40 PERCENTILE	312.5	300.9	292.5	270.8	157.6	117.7	145.8	235.8	288.5	276.7	287.5	299.3	202.9
20 PERCENTILE	317.9	305.0	304.5	283.6	175.3	119.9	161.7	253.3	305.3	307.6	306.4	317.5	221.5
MAXIMUM	336.5	321.9	329.0	348.8	201.1	122.4	203.8	349.9	355.0	329.8	343.7	354.8	242.6
MINIMUM	299.4	274.1	229.6	198.1	125.4	112.8	97.6	177.3	209.4	208.6	237.9	250.4	170.5

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMEND DEVELOPMENT LEVEL
WITHOUT SRD AND STORAGE PROJECTS
WATER QUALITY-TONGUE - MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	515.1	647.3	483.3	621.5	0.0	532.7	0.0	0.0	0.0	533.7	795.4	843.4	586.9
1940	496.0	645.1	605.7	0.0	0.0	465.9	0.0	0.0	0.0	525.2	842.8	927.0	703.1
1941	484.9	717.9	575.4	0.0	632.5	357.1	0.0	0.0	515.4	460.8	518.2	652.5	581.7
1942	731.5	667.7	499.0	594.7	493.9	284.6	0.0	0.0	0.0	475.8	532.6	652.5	517.4
1943	737.5	587.6	454.5	474.9	473.6	275.9	0.0	0.0	0.0	539.8	538.9	675.6	483.8
1944	768.1	724.0	463.4	563.6	416.9	213.5	216.6	0.0	0.0	556.4	519.3	663.6	433.1
1945	731.5	664.5	505.0	604.3	561.2	262.4	324.3	0.0	717.0	435.0	534.7	695.1	493.6
1946	669.1	629.1	426.0	557.2	496.5	276.2	377.0	0.0	488.9	431.6	522.2	631.1	477.4
1947	521.2	550.1	372.5	515.1	416.4	303.0	326.9	0.0	1151.6	539.0	547.6	668.3	459.7
1948	681.7	574.5	438.7	525.4	440.0	301.2	277.7	0.0	0.0	528.7	525.1	789.1	477.7
1949	779.5	720.9	573.5	566.1	475.2	324.5	0.0	0.0	0.0	608.9	552.0	593.2	510.9
1950	761.9	684.7	564.6	547.0	527.2	395.4	678.5	0.0	586.9	511.6	565.4	738.6	574.6
1951	713.5	632.5	577.9	651.2	545.7	416.6	465.8	900.5	452.9	517.3	530.6	767.1	568.0
1952	602.2	674.5	481.7	455.8	445.5	341.5	0.0	0.0	0.0	514.7	660.5	747.6	511.8
1953	747.5	678.9	583.8	727.6	563.8	296.2	0.0	0.0	0.0	552.0	570.0	757.1	556.8
1954	751.6	605.9	575.9	657.8	698.5	675.8	0.0	0.0	0.0	745.0	669.0	747.6	673.9
1955	782.6	728.7	560.5	574.7	471.3	321.6	504.6	0.0	0.0	1011.6	775.6	822.4	568.6
1956	774.8	674.9	487.7	503.8	507.4	340.3	0.0	0.0	0.0	747.6	614.0	728.3	550.0
1957	810.9	694.1	570.5	596.3	545.3	273.9	415.4	0.0	539.6	553.5	716.9	803.7	536.5
1958	766.0	674.5	575.1	671.6	532.5	405.2	425.2	0.0	0.0	572.8	656.0	710.9	599.5
1959	727.5	657.4	572.4	556.2	556.2	498.7	0.0	0.0	705.3	671.2	714.6	743.9	556.0
1960	735.5	653.2	453.0	609.5	0.0	0.0	0.0	0.0	0.0	0.0	885.7	1105.4	644.5
1961	845.9	731.9	795.5	0.0	0.0	0.0	0.0	0.0	0.0	736.5	954.9	860.0	844.2
1962	804.8	595.6	470.5	541.5	476.5	267.4	532.2	0.0	623.4	561.0	675.0	791.5	507.6
1963	908.7	562.0	492.5	654.0	416.9	238.5	589.5	0.0	697.0	0.0	934.7	1090.2	488.3
1964	795.7	655.8	595.7	619.5	471.6	252.1	315.1	851.4	547.9	579.2	682.9	791.5	501.2
1965	696.5	864.8	463.3	459.0	455.4	309.6	356.2	0.0	519.5	447.5	594.9	769.2	468.4
1966	793.5	695.1	562.1	725.5	0.0	0.0	0.0	0.0	0.0	0.0	900.4	942.9	751.7
1967	778.5	624.1	535.1	604.9	504.0	221.2	486.5	0.0	521.7	571.6	599.6	717.1	470.0
1968	651.6	424.0	436.8	574.7	525.0	243.0	369.5	386.7	426.0	456.5	607.0	759.1	459.3
1969	721.5	637.9	570.2	486.4	440.2	361.0	314.2	0.0	697.0	595.1	765.9	733.4	485.1
1970	710.0	602.0	505.5	543.5	507.4	244.2	424.5	0.0	629.9	552.0	623.5	751.5	473.1
1971	741.5	97.2	554.0	493.0	433.9	256.7	0.0	0.0	603.5	426.8	586.9	759.1	438.2
1972	768.1	556.1	568.0	496.2	476.1	305.4	522.8	876.1	556.7	506.3	594.9	801.2	482.9
1973	687.5	591.8	546.6	615.6	416.7	272.6	464.9	0.0	476.0	476.7	571.9	811.5	491.0
1974	504.5	537.3	534.2	604.3	475.5	312.1	501.5	0.0	847.3	575.9	614.0	652.5	529.1
1975	482.9	667.5	415.7	509.2	391.3	242.1	186.7	332.7	542.3	0.0	0.0	0.0	424.0
AVERAGE	737.4	616.2	499.2	527.7	424.9	295.1	239.9	90.6	348.5	500.5	634.4	748.4	537.3
MEDIAN	751.5	653.2	492.5	566.1	475.4	296.7	289.5	0.0	452.9	535.7	607.0	751.5	510.9
80 PERCENTILE	696.5	556.1	424.3	466.4	415.5	245.0	0.0	0.0	0.0	487.5	534.7	668.3	475.1
60 PERCENTILE	735.5	624.1	468.8	545.5	445.3	275.9	0.0	0.0	0.0	514.7	586.9	738.6	491.0
40 PERCENTILE	750.1	647.3	524.5	594.7	476.4	309.6	326.9	0.0	519.5	552.0	636.0	767.1	536.5
20 PERCENTILE	802.2	695.1	575.1	619.5	532.5	357.1	465.8	0.0	623.4	579.2	765.9	811.5	581.7
MAXIMUM	845.9	731.9	795.5	727.6	698.5	678.8	678.5	906.5	1151.6	1011.6	954.9	1105.4	844.2
MINIMUM	504.5	97.2	554.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	518.2	595.2	433.1

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 SECTION D DEVELOPMENT LEVEL
WITHOUT SRD AND STORAGE PROJECTS
WATER QUALITY-YELLOWSTONE-MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	557.8	564.6	497.7	565.3	554.7	212.6	292.7	484.9	544.8	556.6	576.9	607.1	479.6
1940	702.6	560.1	560.5	590.5	586.7	215.1	326.5	682.2	594.5	502.1	598.2	615.9	515.3
1941	650.1	577.1	558.7	564.6	584.3	206.1	304.2	451.6	587.1	586.6	464.3	524.1	466.0
1942	515.7	462.4	442.2	527.2	320.5	253.5	263.2	416.7	513.4	490.8	504.2	547.0	414.9
1943	544.9	441.0	497.0	457.0	322.4	262.9	231.6	337.1	455.2	481.9	487.1	533.6	360.8
1944	536.3	512.3	446.2	546.3	353.5	266.5	245.7	399.9	483.1	494.6	504.6	592.7	394.1
1945	557.2	505.9	465.7	562.7	407.7	231.5	243.9	360.0	467.0	439.0	468.8	552.9	412.0
1946	511.0	487.6	471.6	547.1	373.7	221.4	281.1	450.0	477.1	458.2	497.0	568.3	439.5
1947	576.6	555.3	457.1	505.9	261.1	232.1	247.1	371.8	469.9	437.2	465.9	508.2	395.1
1948	519.0	489.9	441.0	544.8	307.4	259.0	260.8	400.6	534.0	506.8	502.3	623.6	403.5
1949	603.5	525.8	487.4	540.2	322.1	222.8	283.7	463.7	509.8	499.4	508.2	616.7	444.6
1950	586.2	513.5	430.9	528.5	392.1	231.3	247.5	340.3	448.6	411.3	450.0	481.6	401.3
1951	510.2	474.5	435.0	543.2	334.4	221.1	247.5	312.6	422.3	425.5	447.5	510.5	394.5
1952	521.7	482.4	435.0	495.7	243.4	233.4	271.0	388.7	504.5	516.1	537.0	585.8	408.5
1953	539.5	519.1	519.2	583.6	425.9	231.7	271.0	422.4	542.0	540.3	531.4	541.4	452.9
1954	630.5	530.4	564.2	576.5	338.1	206.8	265.0	421.9	543.5	530.5	515.9	561.3	461.7
1955	620.3	557.2	580.8	533.8	388.9	215.9	284.5	505.9	573.0	536.6	556.0	542.5	478.2
1956	580.5	540.8	568.0	534.6	280.7	246.4	277.5	417.9	516.5	539.5	511.0	590.8	422.4
1957	580.9	516.5	495.0	529.9	292.7	269.1	248.4	397.8	450.9	470.5	475.3	524.0	386.3
1958	536.7	502.9	500.9	580.2	322.5	218.1	287.5	471.6	549.5	544.4	544.9	596.5	458.9
1959	576.6	529.0	419.2	567.4	401.5	236.9	269.5	455.4	531.4	484.7	517.2	512.5	434.7
1960	630.7	547.4	495.5	570.6	426.1	209.5	335.0	533.6	569.1	573.3	546.5	625.5	509.7
1961	615.6	554.9	595.2	536.5	446.7	208.7	345.7	694.8	686.7	655.4	663.9	580.4	514.3
1962	596.1	490.2	496.3	534.7	333.2	241.4	256.8	377.3	462.7	471.5	506.8	547.3	411.0
1963	551.5	456.7	495.0	565.6	321.4	245.6	274.0	447.8	482.2	526.0	513.8	545.1	423.2
1964	543.3	499.1	529.8	551.1	334.6	246.1	245.1	391.6	482.2	520.1	514.6	553.9	406.8
1965	503.0	474.7	476.5	460.5	313.0	255.5	234.2	322.6	390.0	404.2	509.6	533.4	364.2
1966	553.4	512.1	470.4	573.9	378.9	203.9	307.3	538.9	566.3	568.1	535.6	546.4	486.1
1967	569.0	532.8	541.3	562.8	361.5	256.2	227.0	354.6	471.0	459.1	468.3	479.8	383.4
1968	471.3	430.5	439.4	557.7	392.1	254.5	252.0	336.0	393.1	420.8	453.4	518.1	382.7
1969	490.5	470.6	401.0	525.5	306.3	217.0	257.5	392.9	503.7	493.3	512.4	504.2	410.9
1970	507.1	474.8	514.9	583.7	285.4	254.4	248.8	392.3	470.0	465.8	482.5	510.9	393.6
1971	490.2	478.7	403.1	462.5	278.2	256.6	246.9	349.2	425.2	382.9	434.2	476.4	355.8
1972	505.1	454.5	554.7	505.5	324.5	243.1	263.6	359.3	432.1	406.5	417.3	545.8	382.5
1973	447.0	462.6	474.4	535.8	291.9	224.2	277.4	394.5	434.1	429.6	399.4	461.5	407.4
1974	495.6	460.8	465.5	507.6	350.7	263.2	242.1	353.4	451.5	460.3	434.4	496.5	376.1
1975	490.7	475.2	431.0	514.0	254.5	246.1	225.3	310.4	468.9	-25.7	2126.2	-25.7	381.2
AVERAGE	553.0	501.8	473.5	544.0	340.4	235.1	267.1	419.0	487.8	486.5	540.1	531.7	422.0
MEDIAN	543.5	502.9	470.4	544.6	334.4	232.1	263.2	397.8	482.2	481.9	504.2	545.8	410.9
80 PERCENTILE	505.1	465.8	435.0	506.9	291.9	213.1	245.7	353.4	434.1	425.5	453.4	508.2	383.4
60 PERCENTILE	536.3	487.6	457.1	538.7	322.6	224.2	252.0	391.6	469.9	460.3	482.5	533.4	403.5
40 PERCENTILE	557.8	513.5	493.5	557.7	353.5	241.4	271.0	417.4	503.7	494.0	509.6	552.9	422.4
20 PERCENTILE	595.1	533.3	518.9	578.5	388.9	253.5	284.5	463.7	542.0	530.5	531.4	590.4	461.7
MAXIMUM	702.6	577.1	595.2	630.5	446.7	269.1	345.7	694.8	594.5	573.3	598.2	625.5	515.3
MINIMUM	471.3	430.5	401.0	457.0	243.4	203.9	227.0	312.6	387.1	382.9	399.4	461.5	355.8

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMEND DEVELOPMENT LEVEL
WITHOUT SRD AND STORAGE PROJECTS
WATER QUALITY-YELLOWSTONE AT SIDNEY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	621.2	624.9	469.7	620.0	419.9	239.9	340.8	617.7	676.0	651.1	640.5	676.0	584.5
1940	795.5	721.5	544.5	643.1	455.5	244.7	385.5	0.0	685.5	520.9	683.2	680.8	586.6
1941	736.2	636.5	596.5	649.8	436.1	254.4	353.9	504.6	423.1	429.1	523.8	574.1	521.0
1942	596.1	536.4	454.0	593.7	592.4	265.9	310.3	503.5	601.8	554.2	552.4	654.5	478.5
1943	604.3	452.5	348.7	490.4	391.0	291.5	270.2	398.9	543.5	572.6	556.9	604.6	409.3
1944	605.2	586.0	427.7	543.9	405.8	309.8	287.3	478.3	575.7	567.0	574.0	668.1	436.8
1945	601.8	566.4	488.8	429.7	471.6	253.9	284.9	436.9	550.7	506.9	542.3	647.9	474.5
1946	564.2	554.5	497.5	613.0	445.0	249.5	325.1	575.1	549.3	497.1	540.1	610.5	503.2
1947	627.8	566.9	405.5	545.6	321.2	259.1	291.0	449.5	561.3	506.8	525.5	579.4	445.5
1948	586.5	549.2	475.0	585.9	403.0	292.6	300.5	486.8	635.2	583.9	568.2	705.7	464.5
1949	667.1	595.2	495.6	584.2	412.6	251.5	332.7	585.4	609.9	585.0	582.6	690.9	518.6
1950	667.5	566.6	492.9	524.2	459.1	259.5	295.0	420.8	543.4	498.1	549.2	565.7	468.9
1951	562.0	548.8	505.6	569.8	433.9	246.5	295.1	366.2	499.2	505.4	512.0	650.0	469.9
1952	564.5	519.5	481.6	432.5	327.4	262.6	320.9	482.0	601.4	616.2	620.0	662.5	463.8
1953	613.4	577.4	572.4	650.5	466.5	294.3	319.3	523.5	640.1	634.8	611.5	633.1	525.5
1954	757.7	560.9	517.3	511.9	411.4	232.7	310.5	500.5	620.7	614.5	588.4	633.4	532.8
1955	724.5	625.5	633.2	555.1	445.4	294.0	329.4	650.2	675.8	619.2	634.9	641.6	550.6
1956	642.5	615.4	490.0	586.9	377.7	274.6	325.4	510.7	602.3	628.5	579.5	652.8	490.4
1957	638.0	584.5	530.0	587.4	378.8	295.1	293.2	492.6	551.5	555.9	551.1	608.2	456.2
1958	604.1	587.6	553.5	630.1	415.5	245.7	332.2	516.6	544.6	623.5	620.7	679.5	535.3
1959	649.7	595.5	401.7	620.9	469.7	260.5	314.5	589.1	627.0	564.4	613.1	596.0	500.3
1960	714.5	596.5	473.1	622.1	495.0	236.2	414.4	755.7	668.3	664.8	626.6	712.0	583.5
1961	676.9	619.7	629.5	694.9	528.4	238.2	447.5	0.0	577.8	526.7	545.7	670.8	598.0
1962	655.0	524.9	527.4	584.0	375.2	290.5	291.1	451.9	551.2	529.3	564.8	609.0	456.3
1963	615.8	492.0	510.5	621.0	365.5	289.7	314.8	553.2	565.1	599.6	579.0	667.6	470.3
1964	600.0	550.6	574.8	605.0	401.1	280.6	283.8	463.2	552.0	595.1	584.5	657.3	463.5
1965	571.0	536.7	524.5	469.5	365.8	292.7	266.2	387.0	484.4	466.5	577.1	594.5	408.7
1966	601.4	560.5	497.2	637.1	460.4	231.7	363.0	697.0	658.1	630.6	604.9	605.3	558.8
1967	644.8	542.6	581.4	606.7	415.1	290.4	266.0	427.1	545.2	512.9	529.2	568.3	437.8
1968	524.5	494.5	450.5	612.3	459.8	285.5	295.7	408.7	460.0	483.2	500.9	568.1	439.4
1969	557.0	532.4	415.7	559.9	385.7	244.6	296.3	488.3	597.9	565.5	571.9	572.3	470.1
1970	570.4	520.9	533.5	629.6	351.0	284.9	293.0	477.9	560.1	534.2	548.4	559.6	452.9
1971	543.7	425.9	404.5	510.1	350.7	291.8	286.3	427.6	502.0	409.3	491.6	581.7	405.4
1972	564.4	497.6	350.9	502.6	383.9	273.5	309.6	440.8	516.2	473.2	476.8	594.7	435.2
1973	550.0	515.1	503.2	581.5	547.5	258.9	325.4	487.5	494.0	484.0	478.6	542.5	463.9
1974	560.2	523.5	520.7	562.6	415.4	287.3	284.0	451.6	530.4	516.7	494.6	555.9	436.9
1975	554.2	553.1	465.1	553.9	240.7	279.0	262.3	375.1	531.7	2011.7	1644.3	861.0	433.6
AVERAGE	621.2	556.3	502.5	585.5	409.8	265.8	314.3	472.6	573.4	590.8	594.3	630.8	483.7
MEDIAN	606.1	560.0	497.2	587.4	411.4	260.5	309.6	482.0	561.3	555.9	564.8	610.5	469.9
90 PERCENTILE	564.4	519.5	427.7	545.6	365.3	244.0	267.3	420.5	516.2	497.1	523.8	572.5	438.9
60 PERCENTILE	600.0	564.0	486.7	594.0	392.5	258.9	295.1	451.9	551.2	526.7	549.2	604.6	463.8
40 PERCENTILE	621.2	560.0	510.5	611.9	415.5	273.5	314.6	492.6	597.9	567.0	577.1	647.9	478.5
20 PERCENTILE	667.1	596.5	572.9	629.6	459.1	289.7	332.2	575.1	635.2	616.2	611.5	668.1	532.8
MAXIMUM	795.5	636.5	638.3	694.9	528.4	309.8	447.5	755.7	685.5	566.8	683.2	712.0	598.0
MINIMUM	524.5	425.9	450.9	432.5	321.2	231.7	266.0	0.0	423.1	409.3	476.8	542.3	405.4

2000

Recommended Development Level

Without SRD and Hardin Project

STUDY NO. 1

YELLOWSTONE LEVEL 4 OPERATION STUDY
2000 REQUIRED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
WATER QUALITY-YELLOWSTONE AT BILLINGS

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	317.2	321.3	274.1	252.8	146.7	122.0	176.0	281.3	351.4	324.0	342.2	344.3	232.3
1940	336.1	320.2	314.4	290.3	157.2	120.4	198.1	360.1	361.6	294.8	331.9	341.9	243.3
1941	324.0	313.8	324.3	297.0	171.1	122.4	191.8	256.0	219.7	208.8	241.8	268.3	227.9
1942	305.3	297.3	269.8	227.0	150.7	117.7	135.1	240.4	294.5	274.0	276.9	278.4	199.6
1943	310.1	274.4	224.3	196.1	151.0	113.4	98.1	189.7	245.5	269.4	276.7	289.4	170.8
1944	304.6	301.9	292.2	305.5	175.4	115.2	126.2	240.8	272.4	278.5	291.2	332.8	203.8
1945	310.4	306.1	299.6	297.7	182.1	117.6	113.3	204.6	267.7	262.6	288.6	308.1	201.2
1946	301.7	284.3	282.0	231.7	163.4	119.4	157.4	264.8	289.7	258.5	286.4	298.4	213.4
1947	304.4	307.8	283.3	247.0	135.1	117.3	127.5	207.7	261.7	246.3	268.4	279.1	191.5
1948	304.3	295.2	280.9	260.7	135.5	114.0	144.8	223.2	311.0	293.9	305.8	341.6	191.1
1949	321.9	305.2	290.1	242.2	140.7	118.6	163.1	266.0	295.1	272.0	292.7	353.5	212.1
1950	334.3	313.9	283.7	271.6	173.4	116.6	111.6	193.6	253.5	234.4	237.1	249.7	191.1
1951	307.0	281.1	283.6	247.9	143.7	119.4	122.0	178.5	248.2	239.7	251.1	294.9	190.6
1952	309.4	294.3	287.4	215.4	125.4	113.8	146.9	213.7	291.9	305.9	314.7	309.9	193.0
1953	307.4	301.6	310.0	295.2	201.2	117.7	136.9	226.6	311.0	321.6	305.3	304.1	218.2
1954	321.1	297.6	317.2	275.8	147.0	120.7	131.2	227.7	309.4	308.0	307.4	316.4	213.2
1955	317.2	314.6	314.3	259.9	182.4	119.7	158.1	252.6	332.0	309.9	323.1	304.9	230.4
1956	310.0	294.6	257.7	236.9	126.3	115.1	146.3	221.4	291.8	307.4	289.0	300.9	189.3
1957	329.0	300.6	287.5	261.4	139.6	115.6	123.0	225.0	261.1	262.3	271.5	287.5	184.5
1958	312.1	304.3	303.9	285.0	140.0	120.2	176.0	258.1	320.0	325.4	298.9	301.0	222.1
1959	315.3	309.1	292.0	268.1	177.0	114.9	134.7	239.4	301.0	259.5	274.4	287.6	200.3
1960	322.4	302.3	292.2	270.6	180.4	119.9	194.3	270.7	348.6	329.6	312.3	324.2	242.7
1961	316.8	305.0	328.4	369.0	186.8	120.4	206.7	329.6	260.8	242.7	248.2	286.1	239.7
1962	314.0	274.8	273.4	225.2	149.8	116.1	133.0	203.4	253.5	270.1	285.0	292.9	190.7
1963	317.5	275.0	301.2	283.7	151.8	115.7	150.9	252.3	277.8	299.8	296.9	321.9	203.4
1964	314.0	296.7	310.3	274.2	157.6	116.1	118.8	216.6	286.7	307.9	293.8	293.2	196.6
1965	299.7	283.0	295.1	237.9	159.1	114.3	104.2	179.7	218.0	226.6	258.8	282.5	175.5
1966	305.3	289.5	278.9	259.7	149.5	121.8	173.6	262.5	301.7	290.6	285.1	288.5	223.1
1967	303.3	292.1	282.3	262.1	159.7	112.8	98.7	204.4	276.6	246.1	262.1	285.5	176.0
1968	309.1	274.3	267.3	266.2	180.7	114.5	119.4	179.6	211.1	231.3	247.0	281.7	185.0
1969	305.9	284.5	268.2	229.4	139.3	118.7	130.5	233.5	300.4	267.8	278.5	290.6	197.1
1970	311.1	293.7	298.5	265.4	138.4	113.9	125.7	220.2	256.4	245.2	269.2	284.6	183.1
1971	303.3	273.3	282.3	244.0	143.8	113.7	111.2	194.4	221.3	228.7	249.7	281.3	174.5
1972	309.6	280.4	238.7	260.3	156.4	114.9	135.2	191.4	220.7	216.4	241.1	281.6	184.2
1973	303.0	284.3	279.3	242.0	146.3	119.2	153.9	245.4	243.1	241.4	266.1	282.7	205.0
1974	304.3	296.3	291.2	245.4	165.6	112.8	110.1	184.4	251.9	265.2	264.9	296.6	178.4
1975	312.7	304.6	273.5	237.5	143.0	114.9	77.5	181.2	253.3	0.0	979.9	959.8	176.7
AVERAGE	312.7	295.6	287.0	262.0	156.3	117.1	139.6	230.5	277.0	264.6	299.8	317.1	201.3
MEDIAN	310.9	297.3	287.4	269.3	151.0	116.8	134.7	225.0	276.6	267.8	276.9	292.9	197.1
80 PERCENTILE	305.3	281.1	268.2	236.9	134.4	114.0	115.3	193.6	245.1	239.7	251.1	281.7	183.1
50 PERCENTILE	309.4	295.7	282.3	247.9	147.3	116.1	127.5	216.6	261.1	261.4	269.2	288.5	191.1
20 PERCENTILE	317.5	307.4	303.9	283.7	175.4	119.7	165.1	256.1	309.4	307.4	305.3	316.4	222.1
MAXIMUM	336.1	321.3	328.4	369.0	201.2	122.4	206.7	360.1	361.6	329.6	342.2	353.5	243.3
MINIMUM	299.7	273.0	224.3	195.1	125.4	112.8	98.1	178.5	211.1	208.8	237.1	249.7	170.8

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL
WITHOUT HARDIN PROJECT
WATER QUALITY OF SHOSHONE RIVER

78/03/15.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	619.4	624.0	582.6	620.9	647.4	645.5	661.0	661.0	661.0	659.5	656.1	622.8	0.0
1940	634.4	626.9	634.2	640.6	660.0	628.6	652.8	661.0	653.3	634.4	615.2	612.6	0.0
1941	640.5	652.0	626.3	592.8	582.4	400.0	552.7	400.0	400.0	453.9	537.1	601.7	0.0
1942	624.7	618.4	591.3	537.1	400.0	400.0	577.2	646.0	634.2	618.1	604.0	620.1	0.0
1943	618.1	610.0	556.7	472.5	544.5	400.0	400.0	618.8	637.8	633.1	596.2	606.5	0.0
1944	618.1	615.1	607.6	567.5	400.0	400.0	458.6	645.5	654.0	631.7	607.5	618.6	0.0
1945	618.7	618.6	583.5	599.0	618.1	400.0	400.0	579.9	596.9	607.2	590.6	599.0	0.0
1946	605.1	610.0	580.7	571.6	634.2	584.1	618.7	646.7	665.9	662.9	582.8	614.9	0.0
1947	635.9	623.6	605.8	565.2	610.4	400.0	400.0	617.4	634.2	613.3	581.4	611.3	0.0
1948	618.8	617.4	575.5	527.9	565.6	400.0	557.4	634.2	635.6	621.5	602.6	611.9	0.0
1949	620.1	623.5	577.9	583.5	635.1	446.2	628.3	654.2	655.4	626.3	606.1	629.0	0.0
1950	631.7	615.8	613.3	618.6	634.2	620.9	620.8	623.5	612.4	597.6	590.6	599.0	0.0
1951	621.5	623.1	615.3	608.2	625.5	442.0	400.0	576.5	630.0	584.7	597.6	617.4	0.0
1952	622.2	617.5	601.7	420.2	400.0	400.0	590.8	620.8	653.3	649.4	615.2	618.8	0.0
1953	612.6	621.7	607.5	627.2	646.7	481.4	656.2	655.5	658.2	639.9	625.1	618.1	0.0
1954	626.2	621.7	623.5	607.5	642.6	630.0	649.4	661.0	658.9	652.1	650.4	629.0	0.0
1955	632.4	626.9	625.2	615.9	660.5	652.5	659.6	661.0	659.6	656.9	630.0	618.1	0.0
1956	624.7	624.7	611.3	648.3	647.4	610.3	652.1	654.2	652.5	646.0	621.6	623.5	0.0
1957	626.9	625.8	620.1	635.5	457.3	400.0	400.0	637.2	635.6	627.6	598.5	602.4	0.0
1958	614.4	622.4	622.8	596.9	400.0	486.4	594.9	634.9	650.4	649.4	613.8	615.3	0.0
1959	622.8	621.7	610.6	615.1	637.8	625.7	647.4	658.3	657.5	631.7	622.3	623.5	0.0
1960	626.2	632.6	607.2	636.4	661.0	654.6	661.0	661.0	658.2	653.5	632.8	636.5	0.0
1961	634.9	633.3	612.6	659.6	661.0	592.7	651.5	658.3	597.6	614.0	594.8	624.2	0.0
1962	626.9	561.9	584.7	533.5	631.7	400.0	573.8	618.8	642.0	650.8	618.0	612.6	0.0
1963	639.9	594.1	583.5	623.0	607.2	400.0	609.2	655.5	632.1	646.0	610.3	621.5	0.0
1964	617.3	621.7	613.3	605.4	567.6	400.0	400.0	646.1	651.6	652.8	637.1	642.6	0.0
1965	640.3	642.6	629.7	575.1	596.9	400.0	400.0	594.2	563.8	583.3	592.0	605.1	0.0
1966	612.3	621.7	618.1	642.7	661.0	655.4	658.3	656.2	647.6	646.1	609.6	622.8	0.0
1967	632.4	631.1	611.3	641.3	623.9	400.0	400.0	639.9	638.5	639.9	600.4	621.5	0.0
1968	624.9	601.3	608.5	627.9	650.1	489.9	648.1	595.6	629.3	634.4	619.5	618.8	0.0
1969	618.1	614.8	613.3	584.2	640.6	440.7	592.2	654.2	645.5	632.4	607.5	618.1	0.0
1970	635.1	625.4	616.0	627.2	602.4	454.7	625.6	655.2	644.8	636.5	609.6	617.4	0.0
1971	624.2	620.9	618.1	617.3	595.4	400.0	613.5	644.6	642.7	576.5	597.6	639.2	0.0
1972	631.7	606.4	582.6	615.2	639.2	400.0	647.4	630.3	649.0	626.9	601.8	619.4	0.0
1973	628.3	619.5	573.3	602.6	471.5	576.5	609.2	646.7	528.6	661.0	661.0	661.0	0.0
1974	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
1975	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
AVERAGE	627.4	621.7	607.1	599.2	587.9	498.5	572.6	633.5	629.5	626.5	612.1	621.5	0.0
MEDIAN	626.2	621.7	610.6	608.2	625.5	446.2	609.2	646.0	642.7	633.1	607.5	618.8	0.0
40 PERCENTILE	618.1	614.4	585.3	567.3	510.4	400.0	400.0	618.8	612.4	607.2	592.0	611.3	0.0
60 PERCENTILE	622.2	619.5	607.2	599.0	596.9	400.0	590.8	639.9	635.6	628.3	602.6	617.4	0.0
80 PERCENTILE	628.3	625.1	613.3	616.0	637.8	486.4	625.6	654.2	649.0	639.9	613.8	620.1	0.0
20 PERCENTILE	632.4	628.9	620.1	635.5	647.4	625.7	652.1	658.3	653.4	650.8	625.1	624.2	0.0
MAXIMUM	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	0.0
MINIMUM	605.1	561.9	556.7	420.2	400.0	400.0	400.0	400.0	400.0	453.9	537.1	594.0	0.0

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMENDED DEVELOPMENT LEVEL
WITHOUT HARDIN PROJECT
WATER QUALITY OF GREYBULL RIVER

76/03/15.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	539.2	553.6	563.9	575.5	576.0	583.1	563.9	563.8	565.7	572.6	545.5	545.1	0.0
1940	571.3	565.4	569.2	575.5	586.8	586.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1941	570.9	571.1	571.5	582.5	586.4	586.8	563.9	563.8	565.7	550.4	533.7	535.5	0.0
1942	537.9	552.2	570.7	575.5	576.8	583.9	537.9	563.8	565.7	573.4	545.5	545.1	0.0
1943	570.9	571.1	571.5	575.5	500.2	502.8	431.9	563.8	565.7	563.8	545.5	545.1	0.0
1944	556.9	552.2	571.5	579.1	586.8	586.8	555.8	563.8	565.7	573.4	545.5	545.1	0.0
1945	570.9	571.1	571.5	582.5	586.4	586.8	493.5	563.8	565.7	565.5	545.5	545.1	0.0
1946	562.0	551.1	567.2	575.5	575.1	530.1	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1947	570.9	571.1	571.5	582.5	570.2	575.1	502.7	563.8	565.7	564.0	545.5	545.1	0.0
1948	557.5	550.0	571.5	575.5	535.7	539.5	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1949	570.9	571.1	571.5	582.5	576.9	581.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1950	570.9	571.1	571.5	582.5	586.4	586.8	487.7	563.8	565.7	557.3	540.8	542.3	0.0
1951	544.8	547.4	569.8	575.5	542.8	546.8	456.2	563.8	565.7	556.8	540.3	541.9	0.0
1952	544.5	551.4	571.5	575.5	538.5	542.3	563.9	563.5	565.7	573.4	545.5	545.1	0.0
1953	570.9	571.1	571.5	582.5	586.4	586.8	552.6	563.8	565.7	573.4	545.5	545.1	0.0
1954	570.9	571.1	571.5	579.1	574.0	578.0	536.6	563.8	565.7	573.4	545.5	545.1	0.0
1955	570.9	571.1	571.5	582.5	586.4	586.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1956	570.9	571.1	571.5	582.5	497.2	499.5	559.4	563.8	565.7	573.4	545.5	545.1	0.0
1957	570.9	571.1	571.5	581.4	515.0	517.9	522.9	563.8	565.7	568.8	545.5	545.1	0.0
1958	569.0	554.9	571.5	577.0	554.0	556.3	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1959	570.9	571.1	571.5	582.5	586.8	586.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1960	570.9	571.1	571.5	575.5	586.8	586.8	563.9	563.8	565.7	573.4	545.5	550.0	0.0
1961	573.5	574.5	572.8	583.3	586.8	586.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1962	570.9	571.1	571.5	575.5	555.6	557.9	544.7	563.8	565.7	571.1	545.5	545.1	0.0
1963	570.3	556.2	570.5	575.5	529.6	532.6	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1964	570.9	571.1	571.5	577.6	573.3	578.1	485.1	563.8	565.7	573.4	545.5	545.1	0.0
1965	570.1	570.1	563.8	575.5	513.7	516.5	452.2	563.8	565.7	555.1	538.5	540.1	0.0
1966	542.5	551.7	563.1	575.5	586.8	586.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1967	570.9	571.1	571.5	582.5	538.7	542.5	475.8	563.8	565.7	570.0	545.5	545.1	0.0
1968	567.3	556.9	567.5	580.0	586.4	586.8	555.6	563.8	565.7	562.0	545.5	545.1	0.0
1969	551.5	548.7	567.9	575.5	571.1	576.0	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1970	570.9	571.1	571.5	582.5	527.3	530.6	540.4	563.8	565.7	569.3	545.5	545.1	0.0
1971	567.4	555.7	570.1	575.5	499.8	502.2	482.2	563.8	565.7	561.4	545.0	545.1	0.0
1972	550.1	561.7	562.8	575.5	586.8	586.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
1973	570.9	571.1	561.2	575.5	541.1	544.8	563.8	563.8	565.7	561.2	544.8	545.1	0.0
1974	549.5	549.5	567.9	575.5	480.4	482.1	508.5	563.8	565.7	569.7	545.5	545.1	0.0
1975	567.8	557.2	565.6	577.5	586.8	586.8	405.1	563.8	565.7	573.4	545.5	545.1	0.0
AVERAGE	564.0	563.2	569.5	578.4	558.9	561.3	531.8	563.8	565.7	569.2	544.7	544.7	0.0
MEDIAN	570.9	571.1	571.5	575.5	573.0	578.0	555.8	563.8	565.7	573.4	545.5	545.1	0.0
80 PERCENTILE	550.1	551.0	567.9	575.5	527.3	530.6	487.7	563.8	565.7	562.0	545.5	545.1	0.0
60 PERCENTILE	569.0	556.4	570.7	575.5	553.6	557.9	540.4	563.8	565.7	570.0	545.5	545.1	0.0
40 PERCENTILE	570.4	571.1	571.5	579.1	577.0	583.1	563.9	563.8	565.7	573.4	545.5	545.1	0.0
20 PERCENTILE	570.9	571.1	571.5	582.5	586.4	586.8	563.9	563.8	565.7	573.4	545.5	545.1	0.0
MAXIMUM	573.5	574.5	572.8	583.3	586.4	586.8	563.9	563.8	565.7	573.4	545.5	550.0	0.0
MINIMUM	537.9	547.4	561.2	575.5	480.4	482.1	431.9	563.8	565.7	550.4	533.7	535.5	0.0

STUDY NO. 1

YELLOWSTONE LEVEL 3 IMPLEMENTATION STUDY
2000 RELEASED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
WATER QUALITY-TONGUE - MILES CITY

73/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	494.5	664.0	662.5	618.9	0.0	336.4	0.0	0.0	0.0	529.0	774.8	851.4	586.4
1940	651.2	591.2	604.4	0.0	0.0	484.2	0.0	0.0	0.0	520.6	817.3	904.1	702.5
1941	637.9	713.0	664.5	0.0	679.4	362.2	0.0	0.0	541.2	458.3	516.4	644.3	585.3
1942	723.4	684.9	496.0	592.6	501.0	286.6	0.0	0.0	0.0	473.0	550.5	648.5	518.2
1943	729.7	584.7	457.7	474.5	479.1	277.6	0.0	0.0	0.0	534.8	536.7	670.8	484.4
1944	760.0	720.0	465.0	564.3	419.6	214.4	224.7	0.0	0.0	550.7	517.4	659.2	434.6
1945	725.8	660.4	503.9	602.1	578.7	253.9	340.5	0.0	0.0	432.9	532.5	689.8	497.0
1946	641.9	624.3	427.5	555.9	503.6	280.1	404.0	0.0	507.0	429.6	520.5	627.4	480.4
1947	515.6	554.0	572.2	514.2	419.2	305.5	385.4	0.0	0.0	534.1	545.2	663.7	461.6
1948	674.5	571.1	435.1	524.5	445.6	303.7	284.1	0.0	0.0	524.1	525.2	780.2	479.9
1949	768.3	716.9	574.2	564.7	480.4	335.1	0.0	0.0	0.0	600.1	549.4	590.2	511.7
1950	755.8	600.9	525.2	585.2	537.9	400.9	0.0	0.0	652.9	507.7	562.4	731.6	579.0
1951	706.5	624.0	575.4	647.6	559.0	427.4	532.7	0.0	464.0	513.2	528.5	759.2	574.9
1952	795.7	670.5	640.8	455.3	489.2	345.7	0.0	0.0	0.0	510.7	653.6	740.5	512.6
1953	734.7	675.1	581.2	719.8	581.2	284.5	0.0	0.0	0.0	546.5	567.0	749.6	560.0
1954	748.7	602.5	574.5	658.1	955.6	0.0	0.0	0.0	0.0	716.7	661.6	740.5	674.5
1955	774.6	724.6	558.4	575.2	477.1	324.8	624.5	0.0	0.0	862.9	759.1	811.7	573.5
1956	766.2	675.1	485.6	503.1	515.7	384.3	0.0	0.0	0.0	720.3	609.4	721.9	551.0
1957	802.4	694.2	568.3	596.5	559.0	275.7	456.9	0.0	574.9	546.2	708.0	794.0	541.5
1958	757.9	670.5	572.7	667.5	584.0	414.5	469.6	0.0	0.0	566.2	630.4	705.1	606.0
1959	719.9	653.7	572.1	554.9	571.9	532.1	0.0	0.0	0.0	656.4	704.0	737.0	558.6
1960	727.7	684.5	432.4	607.2	0.0	0.0	0.0	0.0	0.0	0.0	852.7	1056.4	641.4
1961	877.5	727.8	773.9	0.0	0.0	0.0	0.0	0.0	0.0	713.1	906.6	846.9	826.2
1962	795.9	592.5	464.5	540.2	442.2	264.1	735.3	0.0	733.9	555.1	667.2	782.4	511.5
1963	800.2	660.0	491.3	650.5	419.5	239.6	0.0	0.0	1407.3	1778.5	891.3	1046.2	491.3
1964	787.5	655.1	592.7	618.9	476.9	254.5	329.9	0.0	587.3	572.3	674.7	782.4	505.1
1965	689.5	461.3	462.5	436.7	457.7	312.4	378.2	0.0	546.7	445.3	591.0	761.2	471.1
1966	735.1	691.2	560.0	717.9	0.0	0.0	0.0	0.0	0.0	0.0	864.5	922.4	744.1
1967	770.4	619.6	534.5	602.7	512.1	222.2	297.8	0.0	549.6	565.3	595.5	711.1	472.8
1968	625.2	425.6	435.2	573.2	535.5	244.2	394.3	418.2	433.5	456.0	602.6	751.5	465.1
1969	714.0	634.4	564.9	485.7	445.4	346.3	328.9	0.0	1407.3	585.3	750.5	726.8	488.2
1970	702.5	598.7	504.5	542.2	409.4	245.5	468.5	0.0	751.8	546.5	618.4	744.1	475.9
1971	733.7	9[illegible].6	553.7	492.4	437.1	288.8	0.0	0.0	686.4	424.9	583.3	751.5	439.2
1972	760.0	555.0	567.7	495.5	481.7	308.0	688.0	0.0	604.0	502.6	591.0	791.7	486.2
1973	686.0	584.5	586.5	613.2	419.5	274.4	534.7	0.0	491.2	473.8	568.7	801.4	494.4
1974	494.1	534.5	557.6	602.1	481.3	315.0	616.0	0.0	0.0	569.2	609.4	648.3	535.0
1975	436.2	665.5	413.3	505.4	393.3	243.3	191.5	352.6	576.9	0.0	0.0	0.0	427.1
AVERAGE	729.5	612.3	497.3	525.8	435.0	240.8	235.7	20.8	311.3	538.5	624.7	734.7	539.0
MEDIAN	743.7	644.5	491.3	564.7	479.1	286.3	224.7	0.0	0.0	534.1	602.6	744.1	511.7
80 PERCENTILE	689.4	555.0	427.5	485.7	419.2	239.6	0.0	0.0	0.0	456.0	532.5	665.7	475.9
60 PERCENTILE	737.7	619.6	466.0	542.2	444.2	275.7	0.0	0.0	0.0	515.2	585.3	731.6	494.4
40 PERCENTILE	760.0	664.5	523.2	592.6	482.2	308.0	329.9	0.0	464.0	548.2	630.4	759.2	541.5
20 PERCENTILE	793.7	691.2	572.7	616.9	548.0	385.7	484.5	0.0	587.3	585.3	750.5	801.4	585.3
MAXIMUM	877.5	727.8	773.9	719.8	955.6	532.1	735.3	418.2	1407.3	1778.5	906.6	1056.4	826.2
MINIMUM	494.1	455.3	455.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	516.4	590.2	434.6

STUDY NO. 1

YELLOWSTONE LEVEL B OPERATION STUDY
2000 RECOMMENDED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
WATER QUALITY-YELLOWSTONE-MILES CITY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939	556.3	563.7	497.2	564.7	359.3	212.2	294.4	497.4	588.9	553.4	574.3	605.4	480.9
1940	594.9	567.2	579.6	597.7	386.3	212.7	326.0	729.6	598.6	499.6	595.3	612.2	516.7
1941	649.1	576.2	558.0	584.5	386.5	203.7	306.4	461.3	390.5	385.1	462.6	522.4	467.5
1942	515.0	481.9	441.9	529.6	320.7	233.1	264.1	424.1	517.0	486.4	502.2	545.3	415.8
1943	543.1	480.7	496.6	456.5	322.9	262.5	232.0	341.2	458.4	479.6	485.2	531.9	361.4
1944	535.4	511.9	443.9	545.7	353.6	256.1	246.4	405.5	486.5	491.6	502.7	590.9	395.0
1945	539.3	509.3	455.3	582.0	407.7	231.0	244.5	364.9	471.0	437.1	467.1	551.1	413.1
1946	510.5	487.1	471.4	546.5	373.7	221.0	282.7	459.6	481.3	456.1	495.1	566.5	440.7
1947	577.5	532.6	455.7	508.5	261.2	231.7	247.8	377.1	473.3	435.2	464.2	506.4	395.9
1948	513.2	489.4	440.6	544.2	307.5	256.6	261.7	407.2	537.8	504.3	500.3	621.8	404.4
1949	602.1	525.2	447.1	539.6	322.1	222.3	285.1	474.3	513.4	496.9	506.2	614.9	445.8
1950	584.9	512.9	429.7	527.8	392.4	230.9	248.1	344.5	452.8	409.6	448.4	479.8	402.2
1951	517.3	479.0	432.7	542.6	334.4	220.7	248.2	316.1	426.0	423.7	446.0	508.6	395.4
1952	520.9	481.9	437.7	495.2	243.5	233.0	272.0	394.7	508.0	513.4	534.7	584.1	409.4
1953	538.7	518.5	513.7	584.9	426.9	231.3	272.0	430.2	545.7	537.4	529.2	539.7	454.0
1954	626.8	529.8	563.4	577.8	338.1	206.5	265.8	424.7	547.3	527.6	513.9	559.6	462.8
1955	619.2	553.4	579.9	533.2	388.9	215.5	286.3	520.5	576.9	533.6	553.6	540.7	479.7
1956	574.3	540.1	467.6	534.1	280.8	246.0	278.5	425.4	520.1	536.5	508.9	588.7	423.3
1957	574.5	515.7	494.5	529.3	282.8	268.6	249.2	404.3	454.9	468.3	473.6	522.3	387.1
1958	535.5	502.3	500.3	579.6	322.5	217.7	289.2	483.1	553.3	541.3	542.5	594.7	460.2
1959	569.5	526.4	417.9	566.8	401.6	256.5	270.5	465.3	536.0	482.3	515.2	510.7	455.8
1960	624.0	546.6	492.6	570.0	423.7	209.1	339.8	551.8	573.1	570.3	543.9	623.8	511.1
1961	618.0	554.1	594.3	635.9	448.5	208.3	352.0	765.9	490.1	451.4	462.3	578.7	515.7
1962	594.7	489.7	493.8	534.1	333.2	241.0	257.7	382.8	466.8	469.3	504.8	545.5	412.0
1963	550.5	456.5	494.5	565.2	321.4	245.2	275.2	457.2	486.4	523.5	511.7	583.3	424.3
1964	542.5	498.6	529.2	550.5	334.7	245.7	245.8	397.9	486.4	517.4	512.6	552.1	407.8
1965	502.3	474.2	473.1	459.8	313.0	253.0	234.7	326.5	393.4	402.5	507.6	531.6	364.9
1966	552.4	511.5	470.0	573.3	378.5	203.5	309.7	557.9	570.2	565.2	533.3	544.6	487.3
1967	567.9	532.1	540.7	562.2	361.4	255.8	227.4	359.3	475.1	457.0	466.6	478.1	384.3
1968	471.0	450.0	439.0	537.1	392.1	254.1	252.8	341.0	396.5	419.0	451.8	516.3	383.7
1969	497.6	476.2	400.7	524.7	306.4	218.6	258.5	399.1	508.2	490.8	510.4	502.4	411.9
1970	506.4	474.4	514.3	585.1	295.9	253.9	249.5	398.5	474.2	463.6	480.7	509.1	394.5
1971	489.5	378.5	402.4	461.8	278.3	256.2	247.5	353.6	429.0	381.4	432.8	474.7	356.5
1972	504.4	457.9	358.4	504.9	324.6	242.7	264.7	364.2	435.9	404.8	415.9	544.1	383.3
1973	496.4	462.1	474.5	535.2	291.9	223.6	278.9	400.5	437.9	427.7	398.1	459.7	408.3
1974	495.9	469.3	464.9	507.1	350.4	264.8	242.8	358.1	455.0	456.2	432.9	494.7	376.8
1975	490.1	474.7	430.6	513.5	254.4	245.7	223.7	314.5	473.0	1962.8	1666.0	802.2	382.2
AVERAGE	551.9	500.6	475.9	543.4	340.9	234.7	264.4	429.3	491.6	518.0	525.7	552.4	423.0
MEDIAN	542.5	502.3	470.0	544.2	334.4	231.7	264.1	404.3	486.4	479.6	502.2	544.1	411.9
80 PERCENTILE	504.4	466.5	432.7	506.3	291.9	212.7	246.4	358.1	437.9	423.7	451.8	506.4	384.3
60 PERCENTILE	535.4	487.1	456.7	538.1	322.5	223.8	252.8	397.9	473.3	458.2	480.7	531.6	404.4
40 PERCENTILE	556.5	512.9	496.4	557.1	353.6	241.0	272.0	425.4	508.0	491.6	507.6	551.1	423.3
20 PERCENTILE	594.7	552.6	514.3	577.8	388.9	253.0	286.3	474.3	545.7	527.6	529.2	586.7	462.8
MAXIMUM	649.1	576.2	594.3	635.9	448.5	268.6	352.0	765.9	598.6	570.3	595.3	623.8	516.7
MINIMUM	471.0	378.5	358.4	456.5	243.5	203.5	227.4	316.1	390.5	381.4	398.1	459.7	356.5

STUDY NO. 1

YELLOWSTONE LEVEL 4 OPERATION STUDY
2000 PROJECTED DEVELOPMENT LEVEL
WITHOUT SRD AND HARDIN PROJECT
WATER QUALITY-YELLOWSTONE AT SIDNEY

78/03/16.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1935	520.1	628.1	665.4	623.0	419.5	249.5	589.0	634.8	680.0	647.6	637.4	674.4	549.8
1936	755.4	627.7	637.5	645.6	453.2	284.1	591.1	0.0	639.3	526.7	660.2	679.2	587.4
1937	754.3	653.7	605.5	630.3	448.9	253.0	336.0	518.2	451.5	427.7	522.2	572.5	522.2
1938	543.5	543.0	458.8	545.2	342.5	253.5	311.2	512.8	605.3	556.8	550.5	652.9	474.5
1939	603.1	552.3	593.3	484.9	391.1	291.1	270.5	403.3	546.7	574.0	555.0	603.0	409.9
1940	608.3	567.4	627.4	543.8	409.5	307.4	286.0	486.1	579.1	564.5	572.0	666.5	437.6
1941	600.4	565.8	640.5	629.1	471.7	258.5	285.6	442.7	554.7	507.0	540.6	646.3	475.6
1942	566.5	550.3	647.6	614.4	446.1	249.1	328.6	590.9	553.4	495.2	538.4	608.9	504.4
1943	528.7	554.4	605.3	545.4	321.4	258.7	291.7	455.7	564.7	504.8	525.7	577.8	446.4
1944	565.4	583.7	674.7	565.8	405.0	292.2	301.4	495.1	636.9	581.2	566.3	704.1	465.5
1945	645.7	594.3	695.5	585.7	416.9	251.1	334.3	602.4	613.5	582.5	580.6	689.5	519.7
1950	663.9	586.9	692.6	525.7	459.2	259.1	295.8	426.0	547.4	496.2	547.4	564.1	469.9
1951	541.2	484.5	503.4	555.6	434.0	248.1	295.9	390.3	502.9	503.5	510.4	648.4	470.9
1952	545.5	514.1	681.4	432.1	327.4	252.2	322.1	490.0	604.9	615.1	617.7	660.8	464.6
1953	612.4	576.8	572.5	650.0	585.5	255.9	320.5	534.3	645.9	631.5	609.0	631.4	526.7
1954	755.2	580.4	615.6	611.5	411.5	252.4	311.5	504.6	624.4	611.5	586.3	631.8	534.0
1955	722.5	522.7	547.3	559.6	445.4	245.6	331.2	674.1	677.7	615.1	632.4	639.9	552.1
1956	641.1	612.7	484.7	560.5	377.7	274.4	326.7	520.5	605.8	625.2	577.4	651.2	491.4
1957	638.3	584.9	529.6	540.9	379.4	244.7	244.0	501.2	555.6	553.5	549.5	606.6	457.1
1958	607.2	546.9	533.1	629.5	416.4	246.5	334.1	638.3	448.4	620.2	618.3	677.9	536.7
1959	683.5	597.8	601.5	620.5	459.8	250.1	315.5	606.6	631.6	561.4	610.7	594.4	501.4
1960	712.4	595.6	672.6	621.6	492.6	235.9	465.8	822.5	672.3	665.6	624.1	710.4	585.0
1961	675.5	616.9	623.1	594.8	524.9	237.9	478.4	0.0	581.2	524.5	544.0	669.1	598.8
1962	653.7	524.5	527.0	565.4	373.2	230.1	291.4	458.4	555.3	527.2	562.8	607.4	457.2
1963	615.6	601.7	509.4	620.4	363.4	249.5	316.0	566.6	569.5	597.1	576.9	666.0	471.3
1964	594.1	560.5	574.2	604.8	401.2	240.2	284.5	470.4	556.1	592.5	582.4	655.7	464.5
1965	570.5	536.2	524.0	489.1	343.8	292.5	268.7	391.0	488.0	464.6	575.1	592.6	409.4
1966	600.5	560.0	495.8	536.5	480.0	231.4	346.3	737.5	662.0	627.8	602.6	603.7	560.1
1967	643.5	542.1	580.8	605.1	415.1	290.0	266.4	432.5	549.2	510.9	527.5	566.7	436.7
1968	524.5	499.2	450.0	611.7	454.4	235.1	294.6	414.4	463.4	481.4	499.4	566.5	440.5
1969	550.5	531.4	415.5	559.5	383.1	244.2	299.2	498.7	602.5	563.0	569.4	570.7	471.1
1970	509.7	520.5	533.0	629.0	351.0	284.5	293.6	485.7	564.3	536.9	546.6	557.9	453.8
1971	543.1	425.7	404.5	509.6	351.4	291.4	286.9	433.0	505.8	488.0	490.2	580.1	406.1
1972	545.7	494.2	550.7	562.5	383.9	273.1	310.8	446.9	520.1	471.5	478.5	598.1	436.0
1973	544.9	515.7	502.9	580.9	347.6	258.5	327.1	495.6	497.7	482.2	477.5	540.7	464.9
1974	559.5	522.9	529.5	562.5	415.0	248.9	284.7	437.1	533.7	514.7	493.1	554.3	439.7
1975	552.5	552.6	467.5	593.4	290.7	278.6	262.7	379.6	535.6	1769.0	1546.8	859.6	434.6
AVERAGE	630.1	558.5	582.1	583.9	409.5	265.4	316.6	484.0	577.2	581.9	589.7	629.2	484.7
MEDIAN	607.2	559.4	595.6	586.5	411.5	260.1	310.8	490.0	564.7	553.5	562.8	606.9	470.9
40 PERCENTILE	565.7	539.1	527.8	562.5	385.8	243.6	286.0	426.0	520.1	495.2	522.2	570.7	439.7
60 PERCENTILE	599.1	583.5	685.4	595.4	392.5	258.5	295.4	458.4	555.5	524.5	547.4	605.0	464.6
80 PERCENTILE	620.1	587.4	609.9	611.5	416.5	273.1	316.0	501.2	602.5	564.5	575.1	646.3	479.5
90 PERCENTILE	643.7	595.6	672.5	624.0	459.2	284.5	334.1	590.9	638.9	613.1	609.0	666.5	534.0
MAXIMUM	793.4	836.7	857.5	698.8	529.0	309.4	478.4	822.5	684.3	665.6	640.2	710.4	598.8
MINIMUM	524.5	425.7	550.7	462.1	321.4	231.4	266.4	0.0	481.5	408.0	475.5	540.7	406.1

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